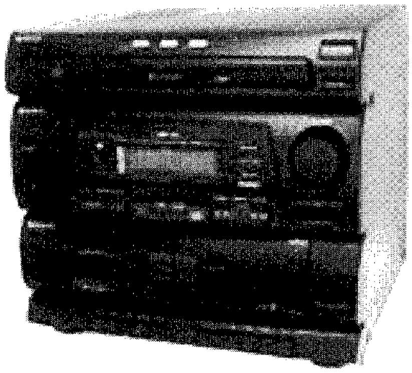
HCD-G1

SERVICE MANUAL

AEP Model
UK Model
E Model



HCD-G1 is the tuner, deck, CD and amplifier section in LBT-G1/G1S.

CD SECTION	Model Name Using Similar Mechanism		NEW
	CD Mechanism Type		CX3
	Base Unit Type		KSM-213BCM
	Optical Pick-up Type		KSS-213B/S-N
TAPE DECK SECTION	Model Name Using Similar Mechanism		HCD-H100
	Tape Transport Mechanism Type	DECK-A	TK20FX-SW043-800
		DECK-B	TK20FX-SW043-800

SPECIFICATIONS

Amplifier section

Continuous RMS power output	
EXCEPT AEP, UK models :	40 + 40 watts (6 ohms at 1 kHz, 10% THD)
AEP, UK models :	28 + 28 watts (8 ohms at 1 kHz, 10% THD)
Peak music power output (EXCEPT AEP, UK models)	550 watts
Music power output (AEP, UK models)	50 + 50 watts
DIN power output (AEP, UK models)	20 watts + 20 watts (8 ohms, at 1 kHz, DIN)
Inputs	PHONO: 4.4 mV
Outputs	PHONES (stereo phone jack): accepts headphones of 8 ohms or more. SPEAKER: accepts impedance of 8 to 16 ohms.

CD player section

System	Compact disc and digital audio system
Laser	Semiconductor laser (λ=780 – 790 nm) Emission duration: continuous
Laser output	Max. 400μW* *This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block with 7 mm aperture.
Frequency response	40 Hz – 16 kHz (±0.5 dB)

Tape player section

Recording system	4-track 2-channel stereo
Frequency response	60 – 13,000 Hz (±3 dB), using Sony TYPE I cassette

Tuner section

FM stereo, FM/AM superheterodyne tuner

FM tuner section

Tuning range	87.5 – 108.0 MHz
Aerial	FM wire aerial
Aerial terminals	75 ohm unbalanced
Intermediate frequency	10.7 MHz

AM tuner section

Tuning range	
Mexican models:	530 – 1,710 kHz (with the tuning interval set at 10 kHz)
AEP, UK models:	531 – 1,602 kHz (with the interval set at 9 kHz)
Other models:	531 – 1,602 kHz (with the tuning interval set at 9 kHz) 530 – 1,710 kHz (with the tuning interval set at 10 kHz)
Aerial	AM loop aerial External aerial terminals
Intermediate frequency	450 kHz

— Continued on next page —

COMPACT DISC DECK RECEIVER

MICROFILM

SONY®

General

Power requirements	AEP, UK models: 220 – 230 V AC, 50/60 Hz Mexican model: 120 V AC, 50/60 Hz Other models: 110 – 120 V or 220 – 240V AC, 50/60 Hz adjustable with voltage selector
Power consumption	AEP, UK models: 120 watts Other models: 195 watts
Dimensions	Approx. 355 × 325 × 330 mm (14 × 12 7/8 × 13 in) (w/h/d) incl. projecting parts and controls
Mass	AEP, UK models: Approx. 7.9 kg (17 lb 7 oz) Other models: Approx. 8.8 kg (19 lb 6 oz)

Design and specifications are subject to change without notice.

CAUTION
Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

Flexible Circuit Board Repairing

- Keep the temperature of soldering iron around 270°C during repairing.
- Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
- Be careful not to apply force on the conductor when soldering or unsoldering.

Laser component in this product is capable of emitting radiation exceeding the limit for Class 1.

CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION	;	INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM.
ADVARSEL	;	USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION. UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARO!	;	AVATTAESSA JA SUOJALUKITUS OHITETTAESSA DLET ALTTIINA LASERSÄTEILYLLE.
VARNING	;	LASERSTRÅLING NÄR DENNA DEL ÄR OPPNÅD OCH SPÄRREN ÄR URXOPPLAD.
ADVARSEL	;	USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES UNNGÅ EKSPONERING FOR STRÅLEN.

This caution label is located inside the unit.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

SERVICING NOTE

NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

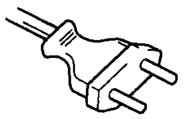
The laser diode in the optical pick-up block may suffer electrostatic break-down because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic break-down and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

NOTES ON LASER DIODE EMISSION CHECK

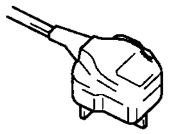
The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

MODEL IDENTIFICATION
— AC POWER SUPPLY CODE —

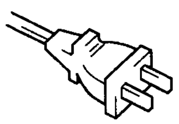
AEP model



UK model



Mexican model (Without voltage selector)
E, Argentine model (With voltage selector)



- Abbreviation
  AR : Argentine model
  MX : Mexican model

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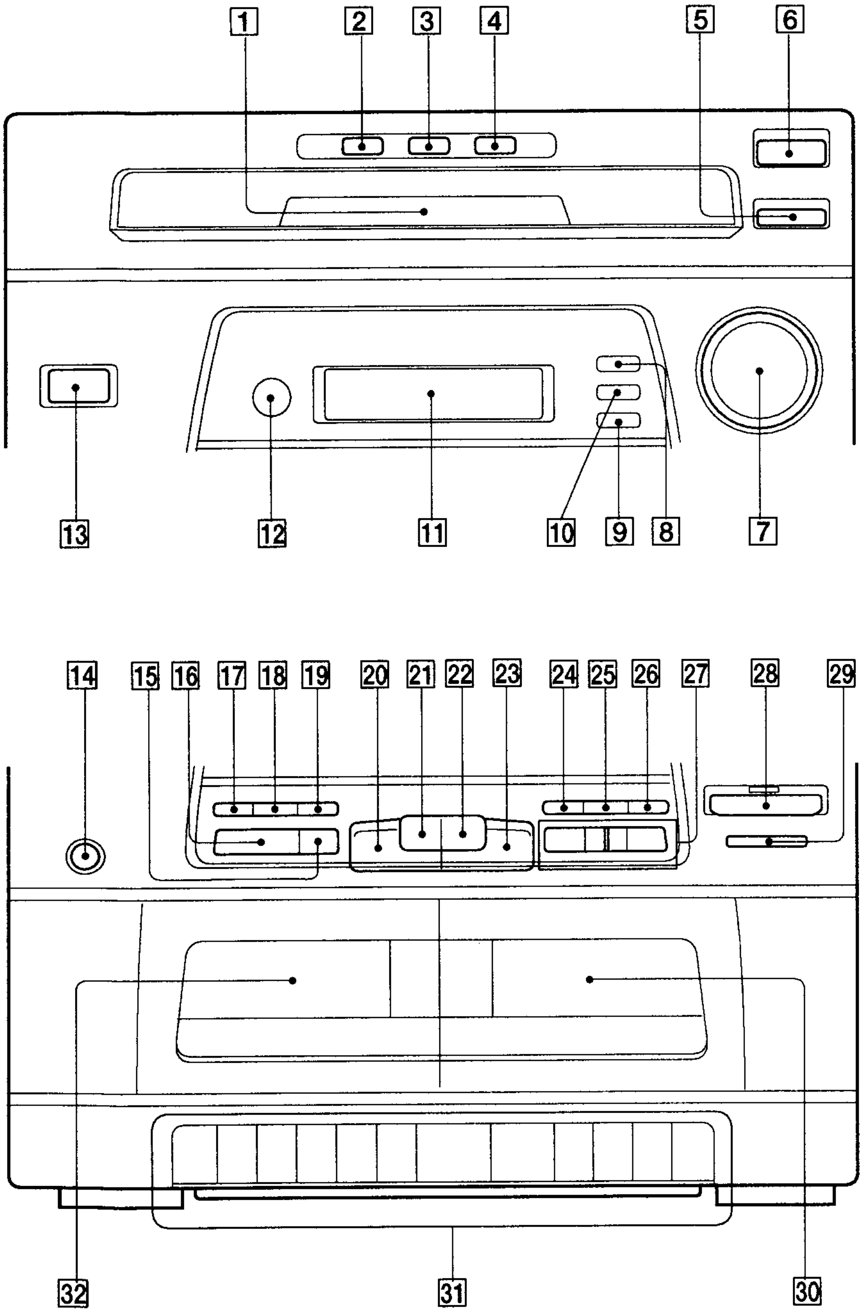
SECTION 1
GENERAL

Location of Parts and Controls

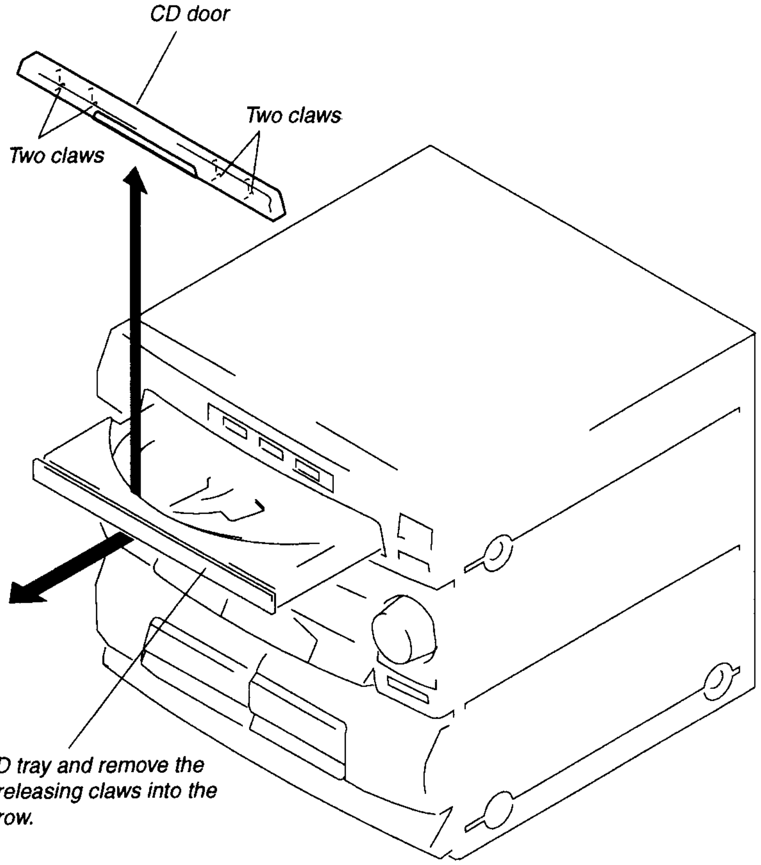


1 Disc tray
2 DISC 1 button
3 DISC 2 button
4 DISC 3 button
5 ⏏ OPEN/CLOSE button
6 DISC SKIP button
7 VOLUME knob
8 CLOCK SET button
9 TIMER SET, CLOCK LIGHT button
10 TIMER MODE button
11 Display window
12 Remote sensor
13 POWER button
14 PHONES jack
15 ■ (stop) button
16 ▷❚❚ (play/pause) button
17 SHUFFLE buttom
18 PROGRAM button
19 REPEAT button
20 CD button
21 TAPE button
22 PHONO button
23 TUNER/BAND button
24 PRESET – button
25 PRESET + button
26 MEMORY button
27 - TUNING +/|◁◁ ◀◀/
▶▶ ▷▷| buttons
28 DBFB button
29 PRESET EQ button
30 Deck B
31 Tape operating buttons
● (recording) (for deck A only)
▷ (play)
◀◀ (fast rewind)
▶▶ (fast forward)
■⏏ (stop/eject)
❚❚ (pause)
32 Deck A

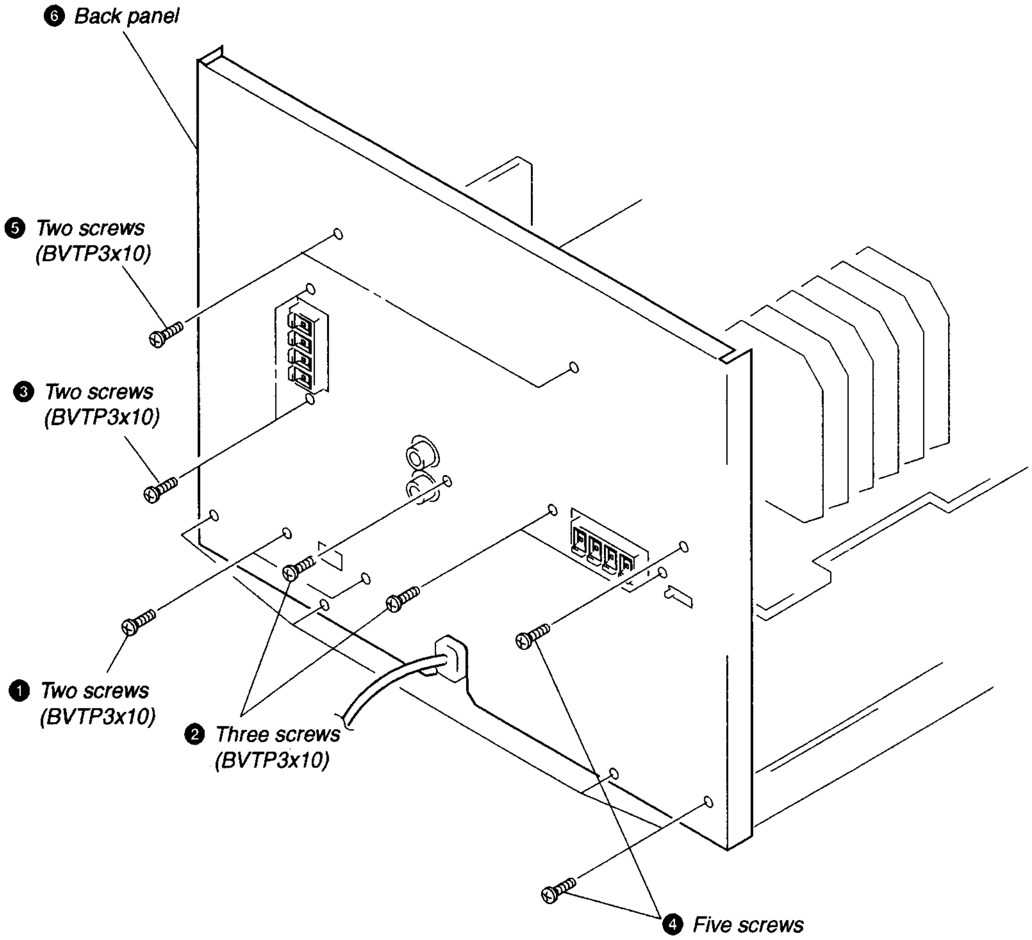
SECTION 2
DISASSEMBLY

Note: Follow the disassembly procedure in the numerical order given.

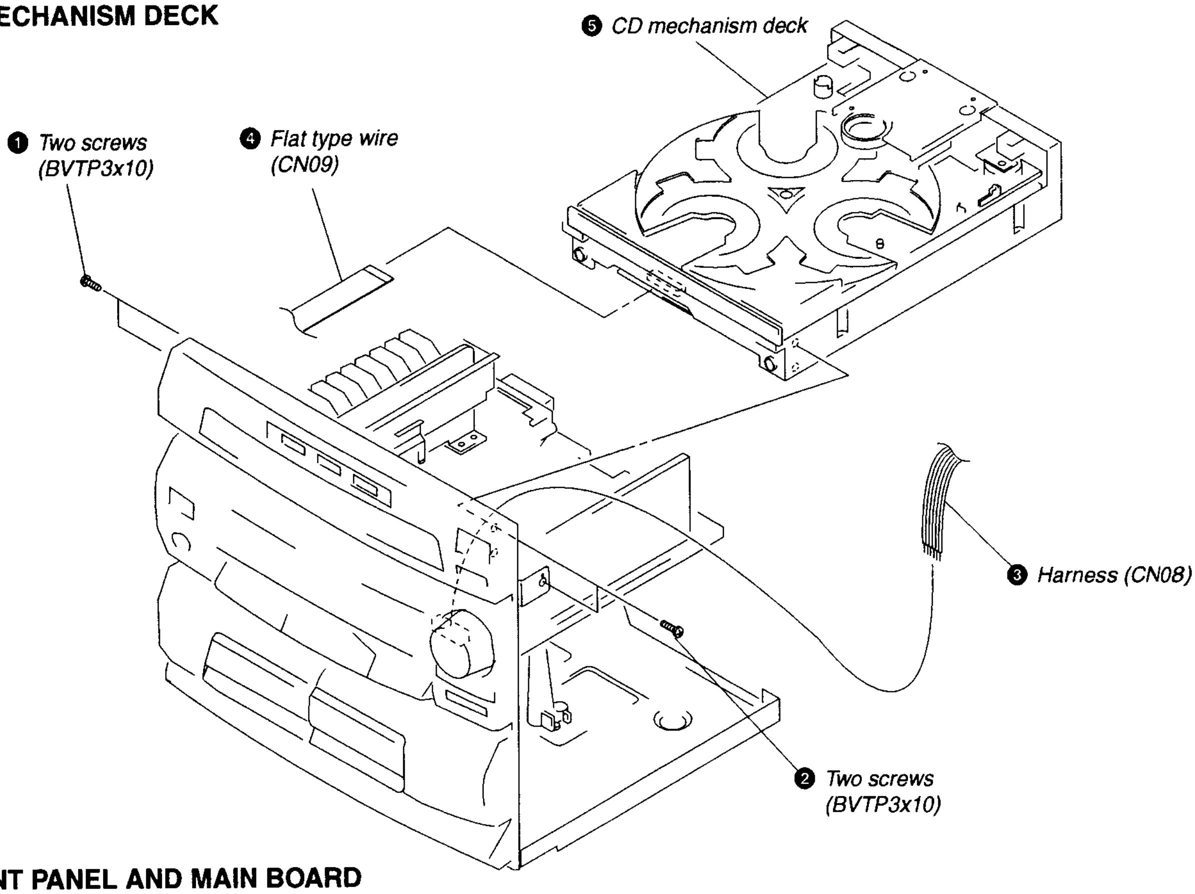
2-1. CD DOOR


CD door
Two claws
Two claws
❶ Pull out the CD tray and remove the CD door with releasing claws into the direction of arrow.

2-2. BACK PANEL

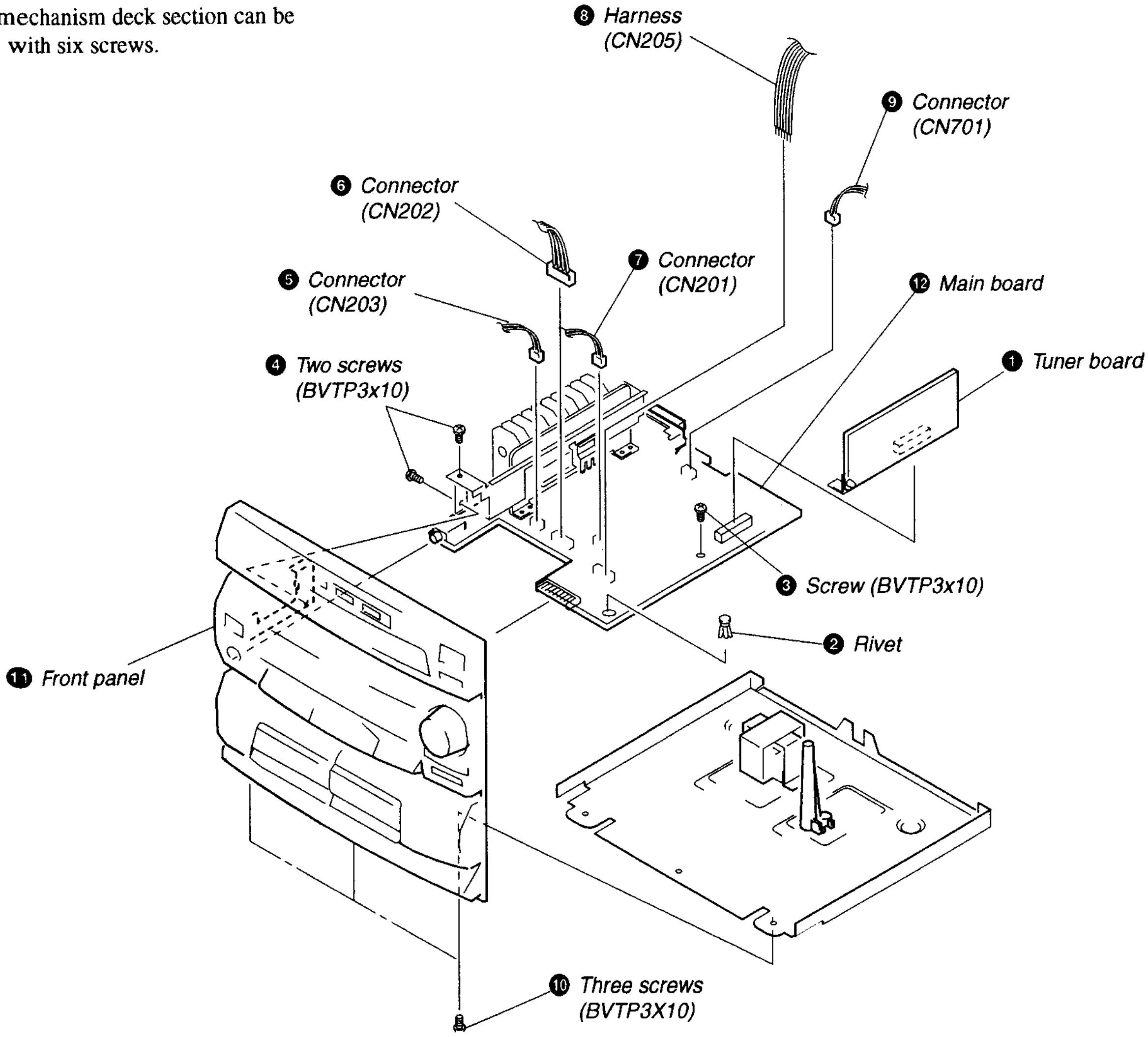

❻ Back panel
❺ Two screws (BVTP3x10)
❸ Two screws (BVTP3x10)
❶ Two screws (BVTP3x10)
❷ Three screws (BVTP3x10)
❹ Five screws (BVTP3x6)

2-3. CD MECHANISM DECK

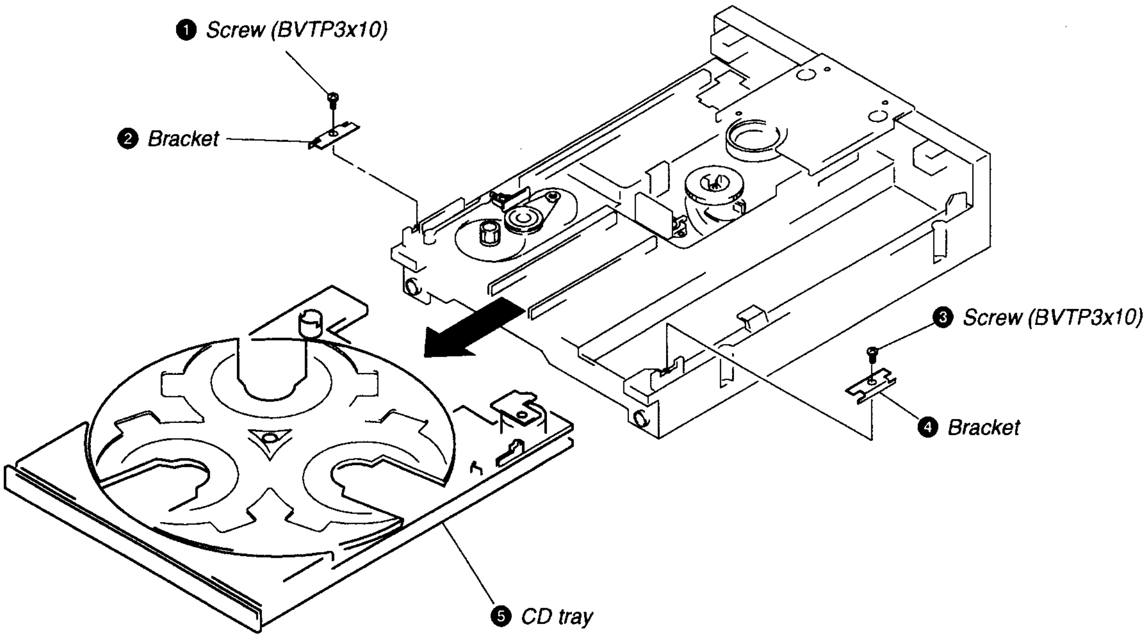

❺ CD mechanism deck
❶ Two screws (BVTP3x10)
❹ Flat type wire (CN09)
❸ Harness (CN08)
❷ Two screws (BVTP3x10)

2-4. FRONT PANEL AND MAIN BOARD

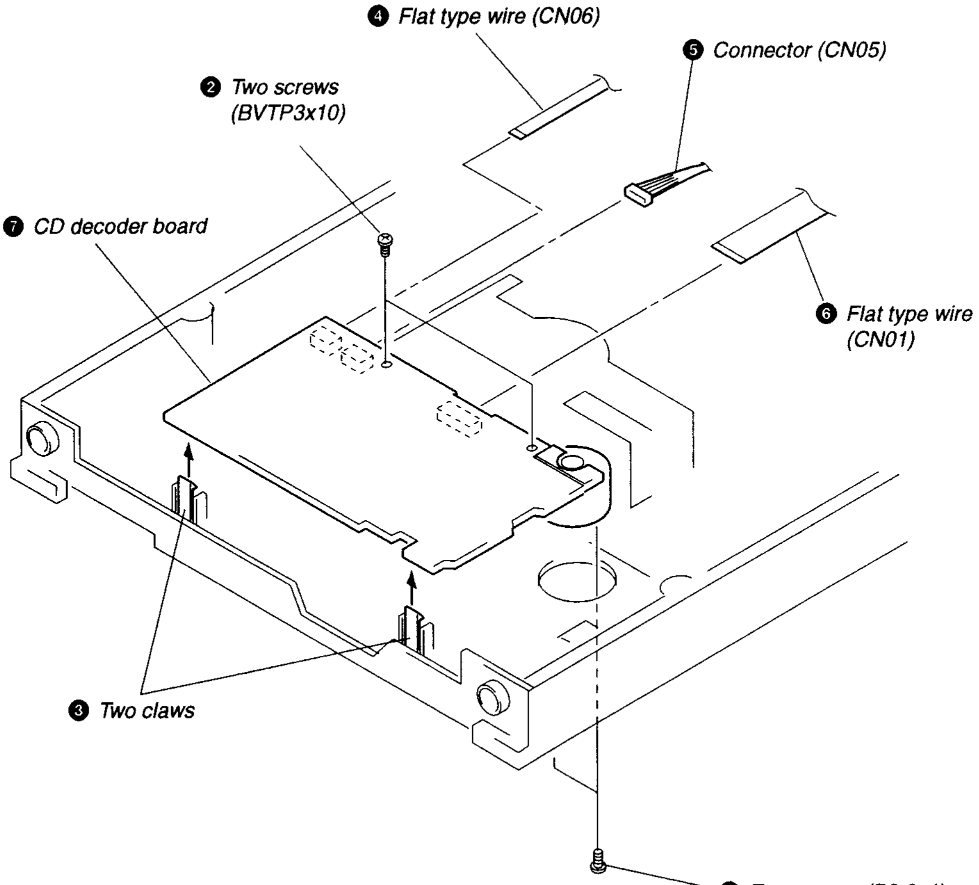
The TC mechanism deck section can be removed with six screws.


❽ Harness (CN205)
❾ Connector (CN701)
❻ Connector (CN202)
❼ Connector (CN201)
❺ Connector (CN203)
⓬ Main board
❹ Two screws (BVTP3x10)
❶ Tuner board
❸ Screw (BVTP3x10)
❷ Rivet
⓫ Front panel
❿ Three screws (BVTP3X10)

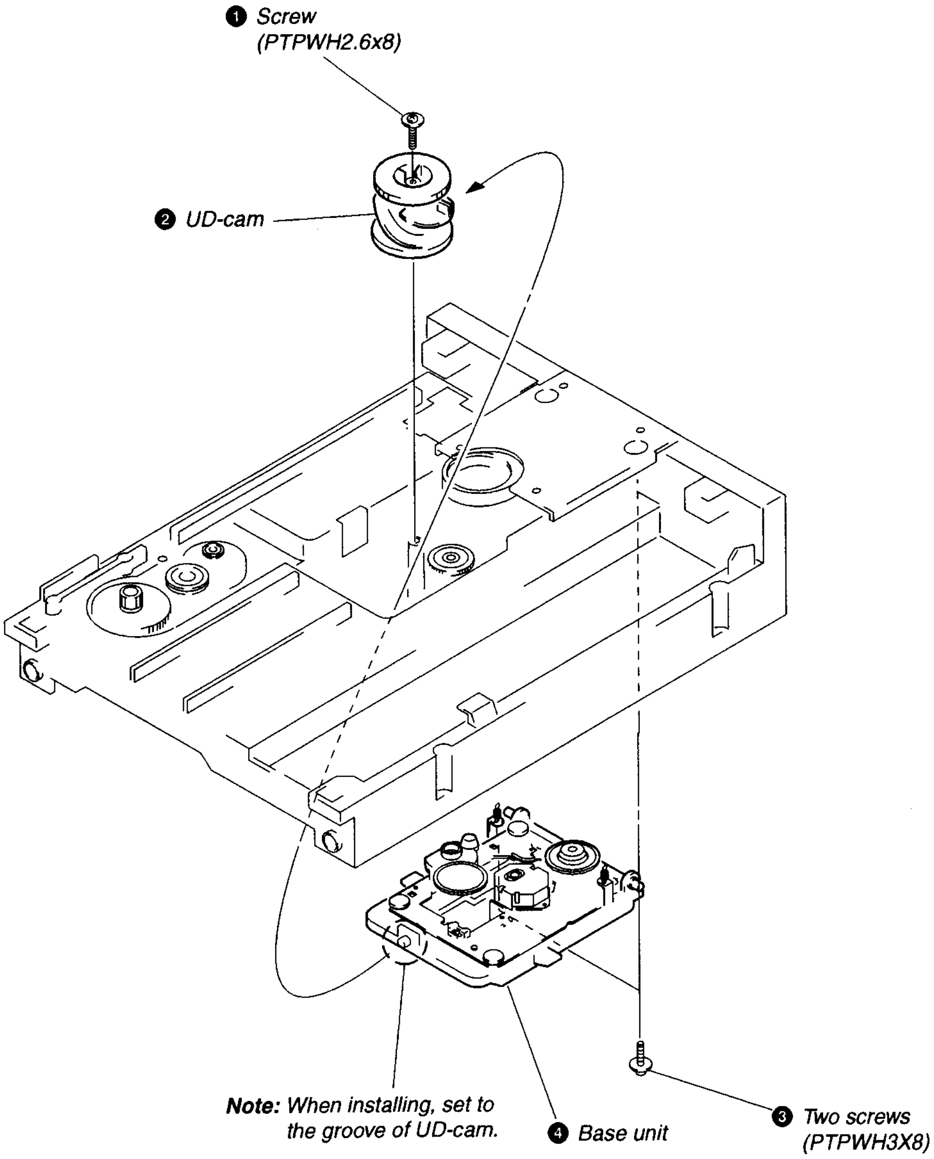
2-5. CD TRAY


❶ Screw (BVTP3x10)
❷ Bracket
❸ Screw (BVTP3x10)
❹ Bracket
❺ CD tray

2-6. CD DECODER BOARD


❹ Flat type wire (CN06)
❺ Connector (CN05)
❷ Two screws (BVTP3x10)
❼ CD decoder board
❻ Flat type wire (CN01)
❸ Two claws
❶ Two screws (P2.6x4)

2-7. BASE UNIT


❶ Screw
(PTPWH2.6x8)
❷ UD-cam
Note: When installing, set to the groove of UD-cam.
❹ Base unit
❸ Two screws
(PTPWH3X8)

SECTION 3
MECHANICAL ADJUSTMENTS

Precaution

1. Clean the following parts with a denatured alcohol-moistened swab:
    - record/playback heads
    - erase head
    - capstan
    - pinch rollers
    - rubber belts
    - idlers
2. Demagnetize the record/playback head with a head demagnetizer.
3. Do not use a magnetized screwdriver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustments should be performed with the rated power supply voltage unless otherwise noted.

Torque Measurement

Torque	Torque meter	Meter reading
FWD	CQ-102C	40 to 70 g • cm (0.56 - 0.97 oz • inch)
FWD back tension	CQ-102C	1 to 5 g • cm (0.01 - 0.07 oz • inch)
FF/REW	CQ-201B	55 to 140 g • cm (0.76 - 1.94 oz • inch)

SECTION 4
ELECTRICAL ADJUSTMENTS

DECK SECTION **0 dB=0.775V**

1. Demagnetize the record/playback head with a head damagnetizer.
2. Do not use a magnetized screwdriver for the adjustments.
3. After the adjustments, apply suitable locking compound to the parts adjusted.
4. The adjustments should be performed with the rated power supply voltage unless otherwise noted.
5. The adjustments should be performed in the order given in this service manual. (As a general rule, playback circuit adjustment should be completed before performing recording circuit adjustment.)
6. The adjustments should be performed for both L-CH and R-CH.

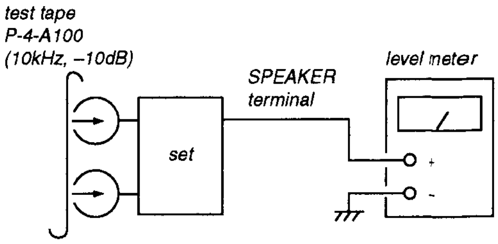
Tape	Signal	Used for
P-4-A100	10 kHz, –10 dB	Azimuth Adjustment
WS-48B	3 kHz, 0 dB	Tape Speed Adjustment

Record/Playback Head Azimuth Adjustment (Deck A, Deck B)

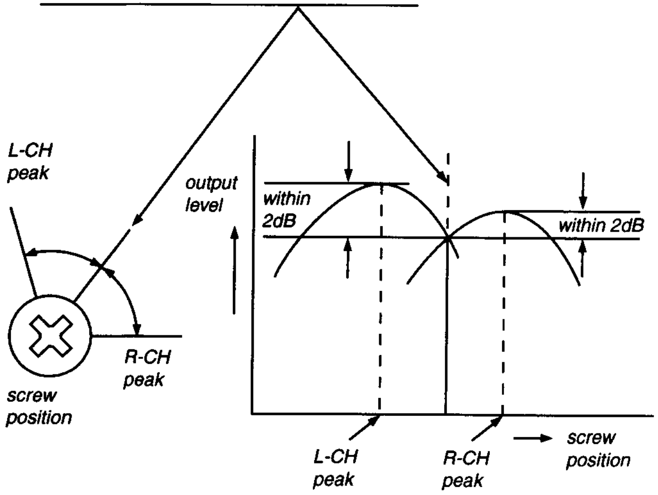
Note: Perform this adjustments for both decks.

Procedure:

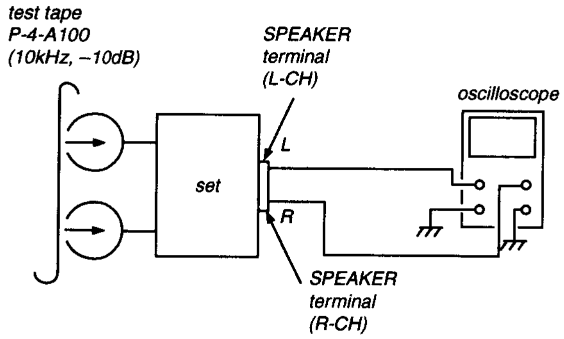
1. Mode : Playback

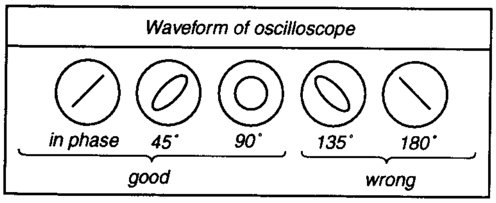


2. Turn the adjustment screw and check output peaks. If the peaks do not match for L-CH and R-CH, turn the adjustment screw so that outputs match within 2 dB of peak.


L-CH peak
output level
within 2dB
within 2dB
R-CH peak
screw position
L-CH peak
R-CH peak
screw position

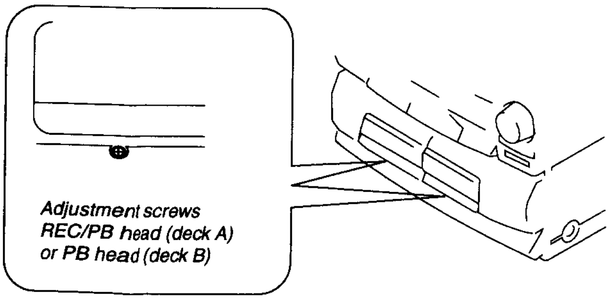
3. Mode: Playback


test tape
P-4-A100
(10kHz, −10dB)
SPEAKER terminal (L-CH)
oscilloscope
L
set
R
SPEAKER terminal (R-CH)


Waveform of oscilloscope
in phase
45°
90°
135°
180°
good
wrong

4. After the adjustments, apply suitable locking compound to the parts adjusted.

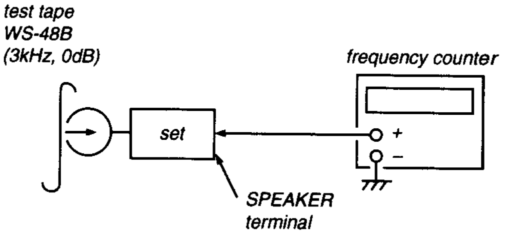
Adjustment Location:


Adjustment screws
REC/PB head (deck A)
or PB head (deck B)

Tape Speed Adjustment (Deck A)

Procedure:

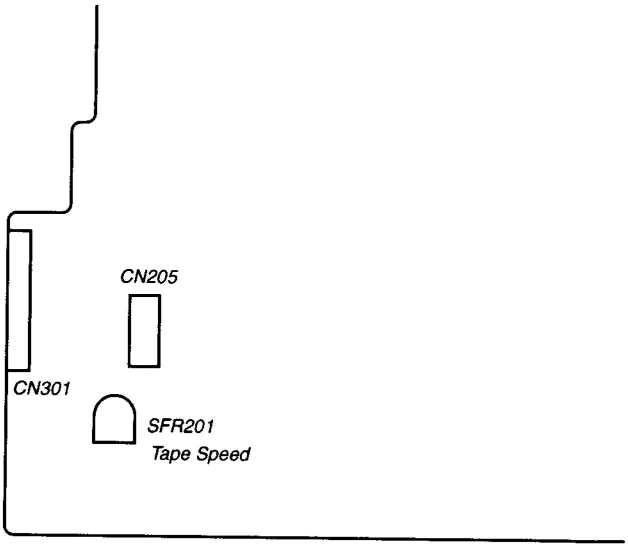
1. Mode: Playback


test tape
WS-48B
(3kHz, 0dB)
frequency counter
set
+
−
SPEAKER terminal

2. Adjust the SFR201 so that the frequency counter reads 3,000 Hz ± 90 Hz.

Adjustment Location

[MAIN BOARD] — Component side —


CN205
CN301
SFR201
Tape Speed

Sample Value of Wow and flutter

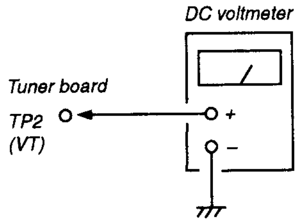
W. RMS (JIS) within 0.3%
(test tape: WS-48B)

TUNER SECTION

0 dB=1μV

Note: As a FM front end (U1) is difficult to repair if faulty, replace it with new one. (AEP, UK models)

AM Tuning Voltage Adjustment

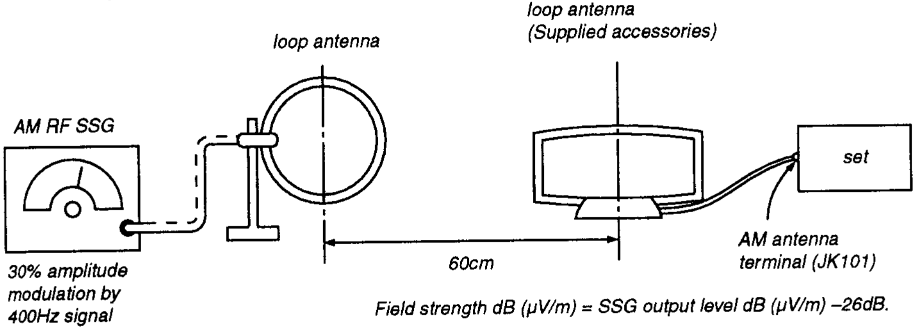

DC voltmeter
Tuner board
TP2
(VT)
+
-

Procedure:

1. Set the reception frequency of the unit to 530 kHz (10 kHz step) or 531 kHz (9 kHz step).
2. Adjust L105 for 1.2 ± 0.05 V reading on the DC voltmeter.
3. Set the reception frequency of the unit to 1,710 kHz (10 kHz step) or 1602 kHz (9 kHz step).
4. Confirm that the voltage reading on the DC voltmeter is within 8.0 ± 0.5 V.

Adjustment Location: TUNER board

AM Tracking Adjustment


loop antenna
loop antenna
(Supplied accessories)
AM RF SSG
set
60cm
AM antenna
terminal (JK101)
30% amplitude
modulation by
400Hz signal

Field strength dB (μV/m) = SSG output level dB (μV/m) −26dB.

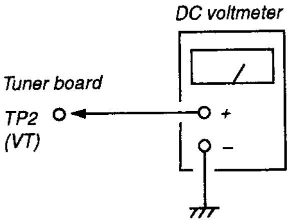
Procedure:

1. Tune the set to 600 kHz (10 kHz step) or 603 kHz (9 kHz step).
2. Set the output of AM RF SSG so that the input level of the set will become 60 dB (μV/m).
3. Adjust L104 so that when the waveform on the oscilloscope is maximum, no noise appears.
4. Tune the set to 1,400 kHz (10 kHz step) or 1404 kHz (9 kHz step).
5. Adjust TC102 so that when the waveform on the oscilloscope is maximum, no noise appears.

- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

Adjustment Location: TUNER board

FM Tuning Voltage Adjustment (EXCEPT AEP, UK models)

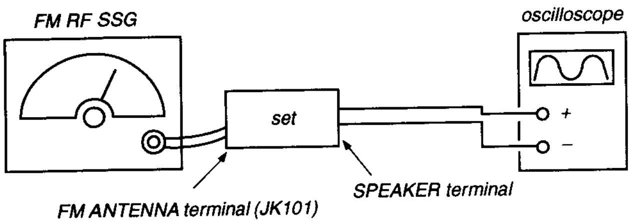

DC voltmeter
Tuner board
TP2
(VT)
+
-

Procedure :

1. Set the reception frequency of the unit to 87.5 MHz.
2. Adjust L103 for 1.2 ± 0.05V reading on the DC voltmeter.
3. Set the reception frequency of the unit to 108 MHz
4. Confirm that the voltage reading on the DC voltmeter is within 7.8 ± 0.5V.

Adjustment Location: TUNER board

FM Tracking Adjustment (EXCEPT AEP, UK models)


FM RF SSG
oscilloscope
set
+
–
SPEAKER terminal
FM ANTENNA terminal (JK101)

Carrier frequency : 90 MHz, 106 MHz
Modulation : AUDIO 1kHz, 75kHz deviation (100%)
Output level : 20 dB (at 75 Ω open)

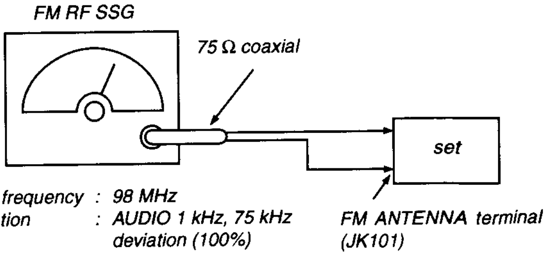
Procedure:

1. Tune the set to 90 MHz.
2. Adjust L102 so that when the waveform on the oscilloscope is maximum, no noise appears.
3. Tune the set to 106 MHz.
4. Adjust TC101 so that when the waveform on the oscilloscope is maximum, no noise appears.

- Repeat the procedures in each adjustment several times, and the tracking adjustment should be finally done by the trimmer capacitors.

Adjustment Location: TUNER board

FM Tuned Level Adjustment


FM RF SSG
75 Ω coaxial
set
FM ANTENNA terminal (JK101)

Carrier frequency : 98 MHz
Modulation : AUDIO 1 kHz, 75 kHz deviation (100%)
Output level : 28 dB (at 75 Ω open)

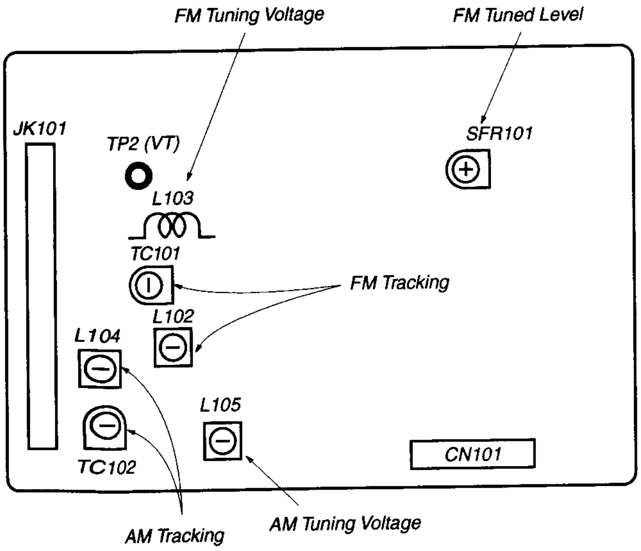
Procedure:

1. Supply a 28 dB 98 MHz signal from the ANTENNA terminal.
2. Tune the set to 98 MHz.
3. Adjust SFR101 to the point (moment) when the TUNED indicator will change from going off to going on.

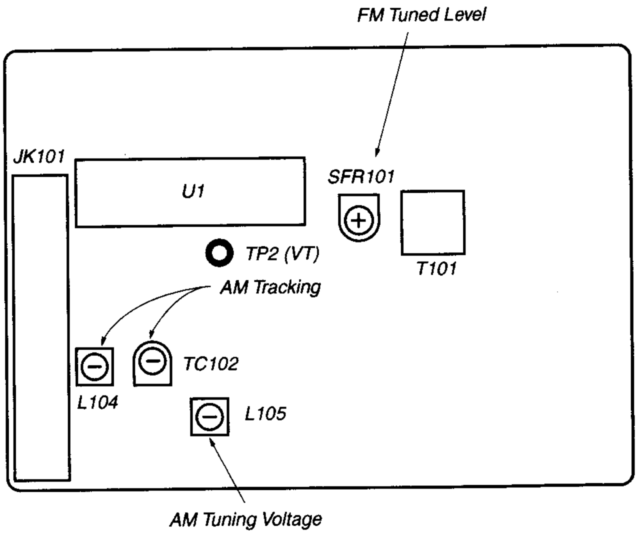
Adjustment Location: TUNER board

Adjustment Location

EXCEPT AEP, UK models [TUNER BOARD] — Component side —


FM Tuning Voltage
FM Tuned Level
JK101
TP2 (VT)
SFR101
L103
TC101
FM Tracking
L102
L104
L105
TC102
CN101
AM Tracking
AM Tuning Voltage

AEP, UK models [TUNER BOARD] — Component side —

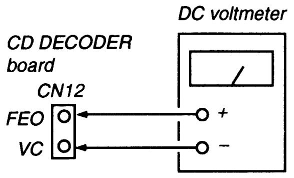

FM Tuned Level
JK101
U1
SFR101
TP2 (VT)
T101
AM Tracking
TC102
L104
L105
AM Tuning Voltage

CD SECTION

Note:

1. CD Block is basically constructed to operate without adjustment. Therefore, check each item in order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use an oscilloscope with more than 10MΩ impedance.
4. Clean the object lens by an applicator with neutral detergent when the signal level is low than specified value with the following checks.
5. Adjust the focus bias adjustment when optical block is replaced.

Focus Bias Adjustment


DC voltmeter
CD DECODER board
CN12
FEO
VC
+
–

Procedure:

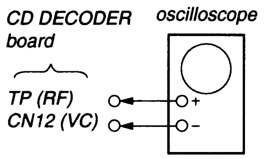
1. Connect DC voltmeter to test point CN12 (FEO), (VC) on CD DECODER board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and stop.
4. Adjust VR01 so that the DC voitmeter reading is 0 ± 20 mV.

Adjustment Location: CD DECODER board

Focus Gain Adjustment (VR02)

This gain has a margin, so even if it is slightly off.
There is no problem.
Therfore, do not perform this adjusment.
Please note that it should be fixed to mechanical center position when you moved and do not know original position.

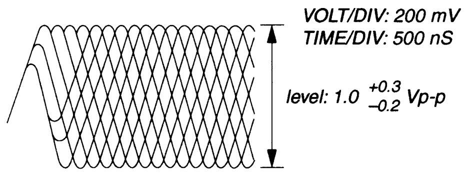
RF Level Check


CD DECODER board
oscilloscope
TP (RF)
CN12 (VC)
+
–

Procedure :

1. Connect oscilloscope to test point TP (RF) on CD DECODER board.
2. Turned Power switch on.
3. Put disc (YEDS-18) in and playback.
4. Confirm that oscilloscope waveform is clear and check RF signal level is correct or not.

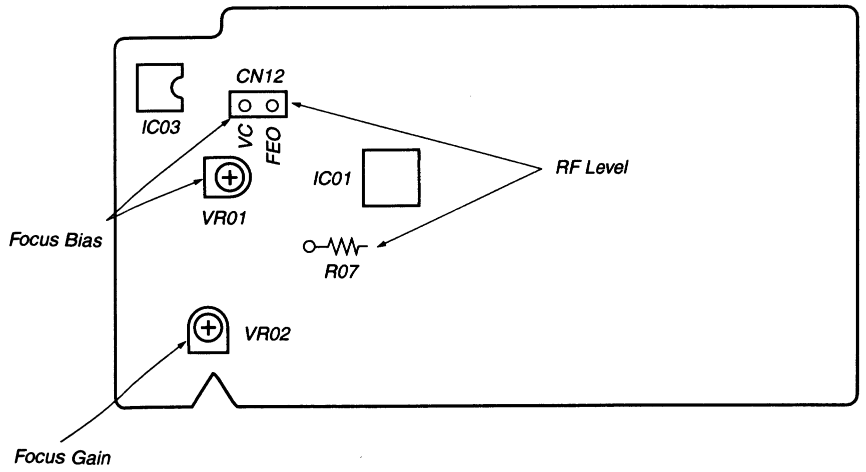
Note: Clear RF signal waveform means that the shape "◊" can be clearly distinguished at the center of the waveform.



Adjustment Location: CD DECODER board

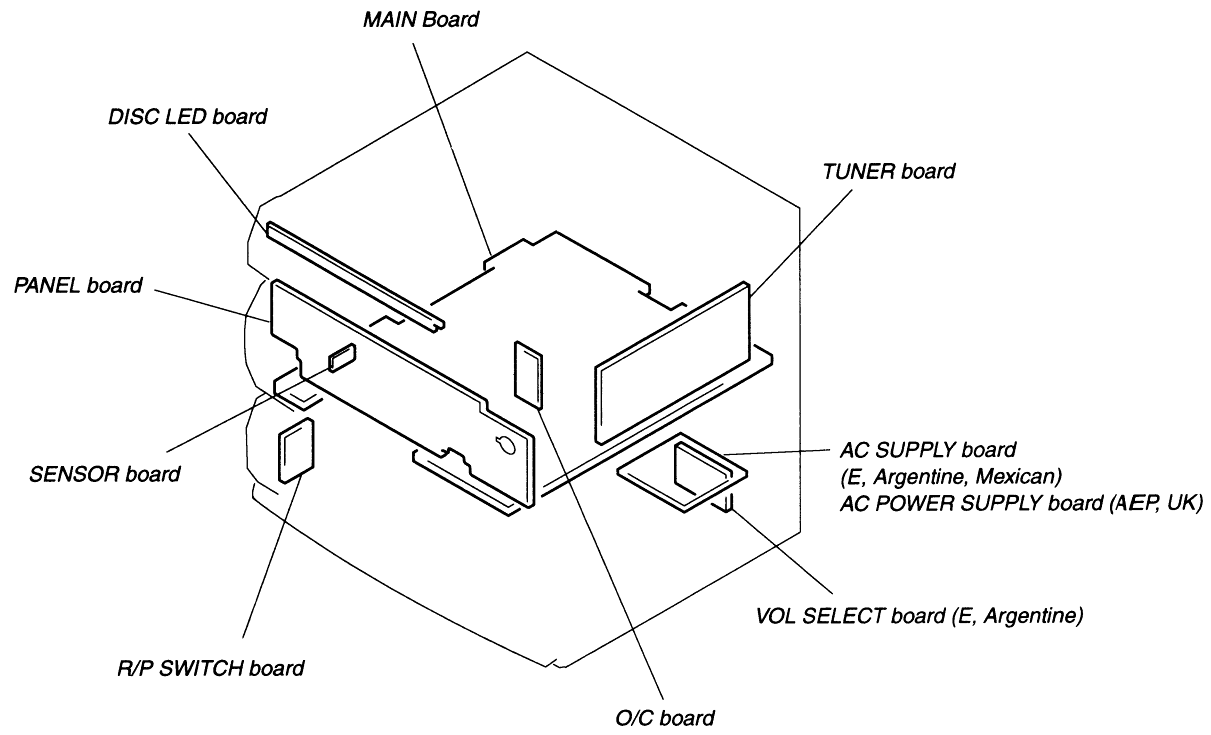
Adjustment Location

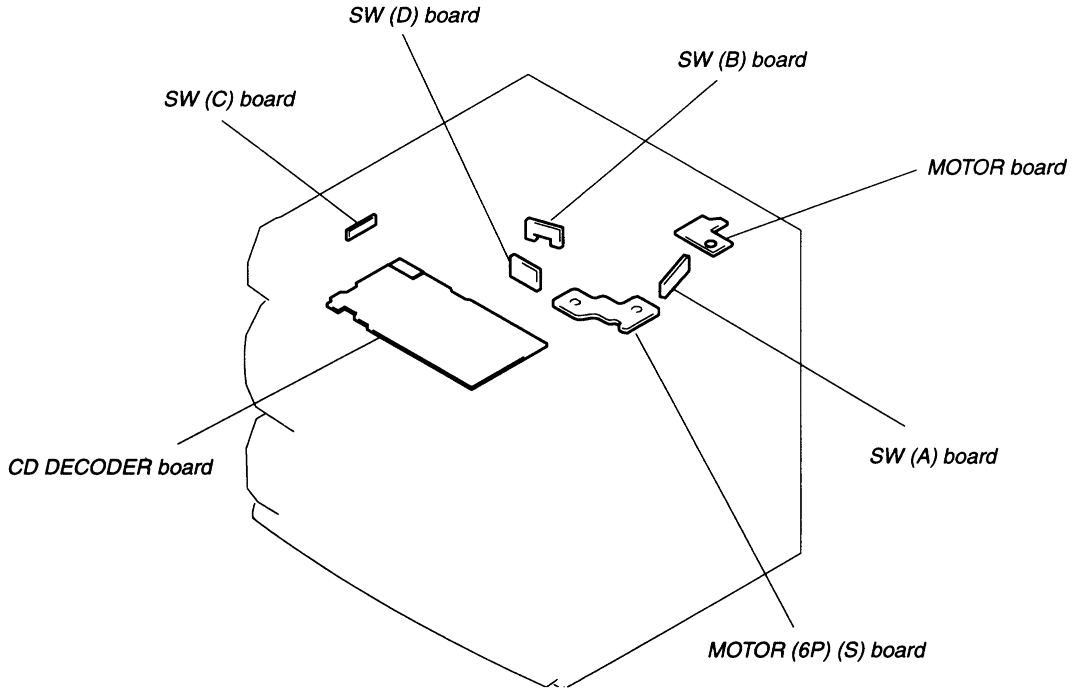
[CD DECODER BOARD] — Component side —


CN12
IC03
VC
FEO
IC01
RF Level
VR01
Focus Bias
R07
VR02
Focus Gain

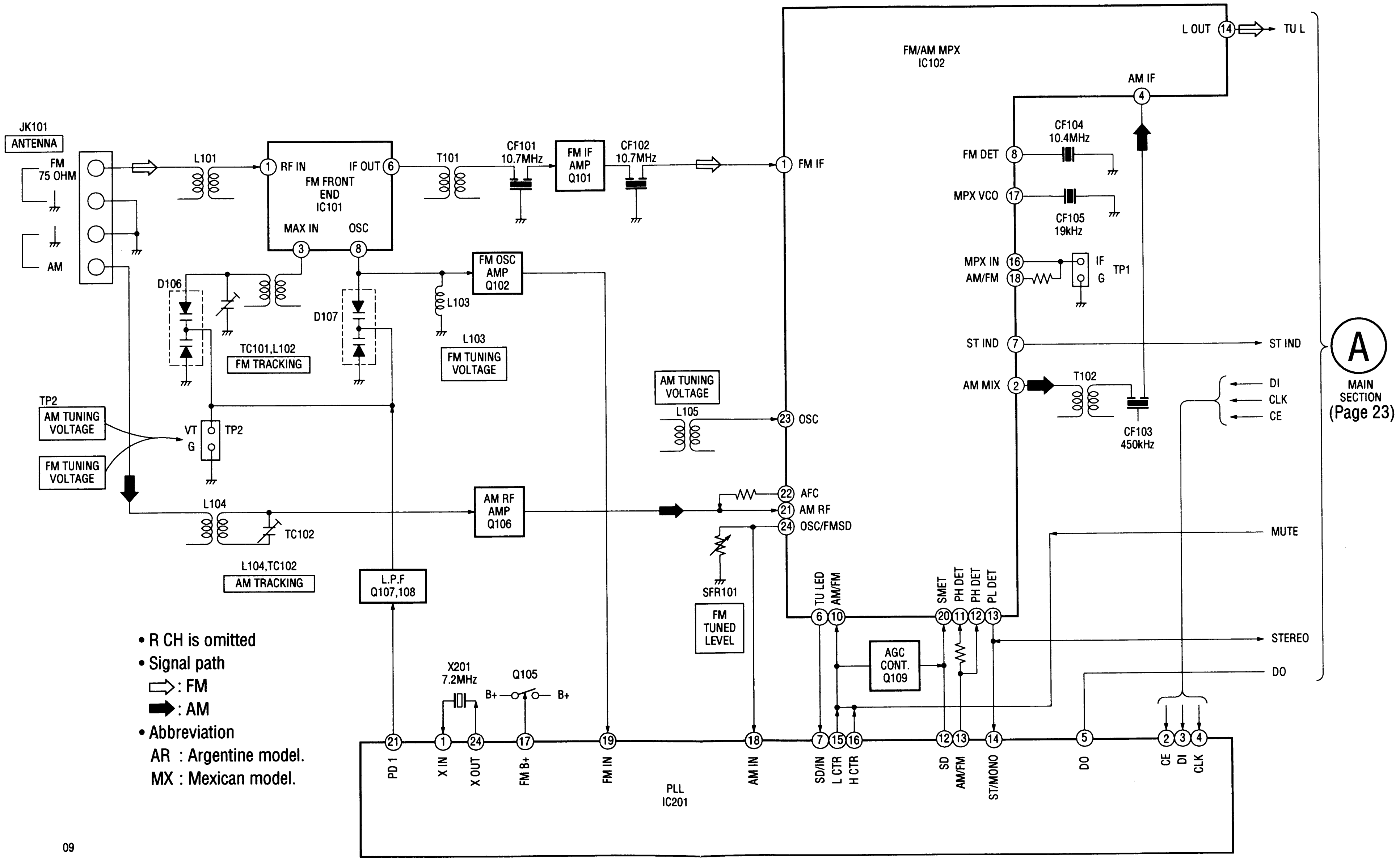
SECTION 5
DIAGRAMS

5-1. CIRCUIT BOARDS LOCATION


MAIN Board
DISC LED board
TUNER board
PANEL board
SENSOR board
AC SUPPLY board
(E, Argentine, Mexican)
AC POWER SUPPLY board (AEP, UK)
VOL SELECT board (E, Argentine)
R/P SWITCH board
O/C board


SW (D) board
SW (B) board
SW (C) board
MOTOR board
CD DECODER board
SW (A) board
MOTOR (6P) (S) board

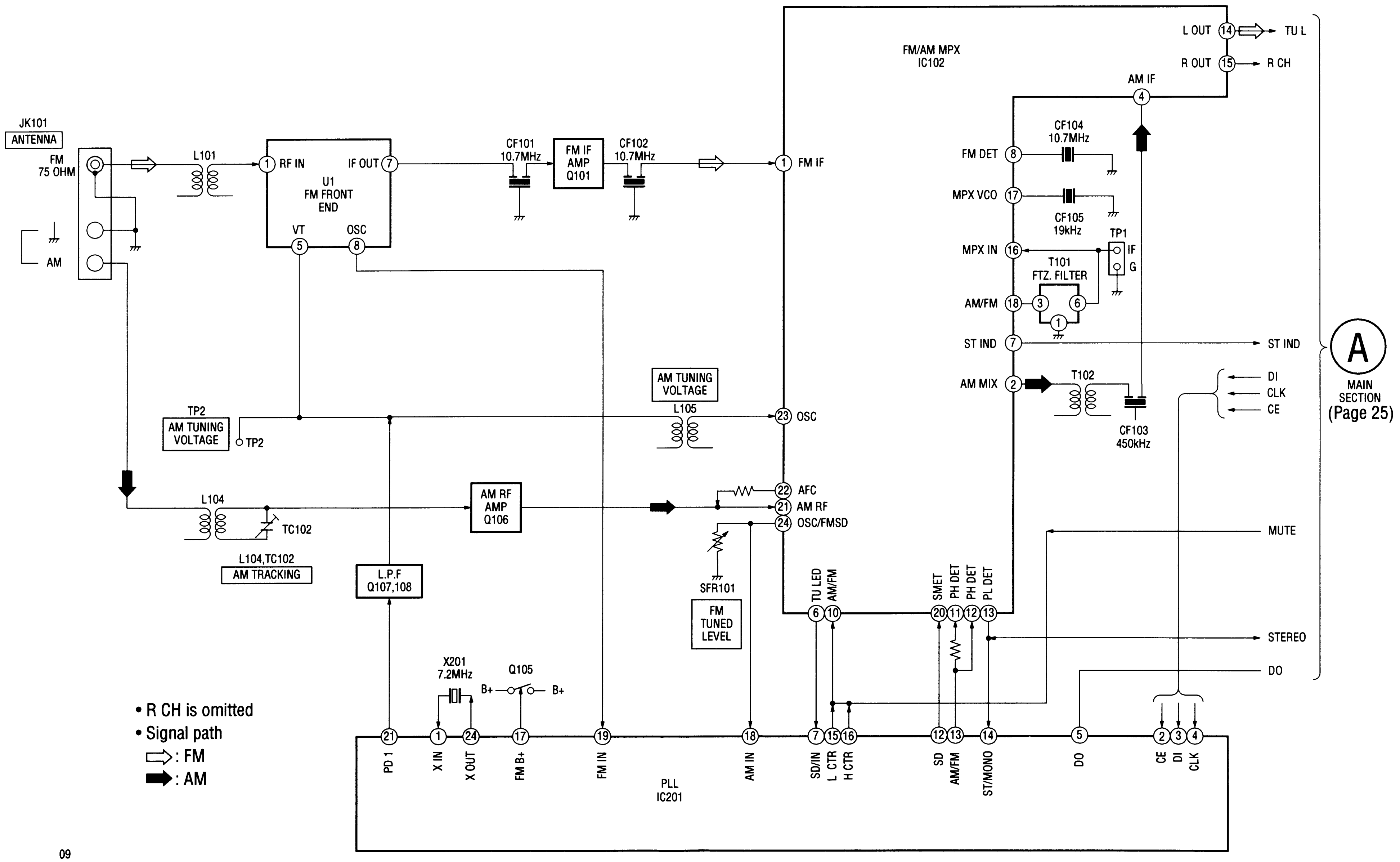
5-2. BLOCK DIAGRAMS
—TUNER SECTION— (E, AR, MX models)


JK101
ANTENNA
FM 75 OHM
AM
L101
RF IN
IF OUT
FM FRONT END IC101
MAX IN
OSC
T101
CF101 10.7MHz
FM IF AMP Q101
CF102 10.7MHz
FM IF
FM/AM MPX IC102
L OUT
TU L
AM IF
CF104 10.4MHz
FM DET
MPX VCO
CF105 19kHz
MPX IN
AM/FM
IF
G
TP1
ST IND
ST IND
AM MIX
T102
CF103 450kHz
DI
CLK
CE
A
MAIN SECTION (Page 23)
D106
TC101,L102
FM TRACKING
D107
FM OSC AMP Q102
L103
L103
FM TUNING VOLTAGE
AM TUNING VOLTAGE
L105
OSC
TP2
AM TUNING VOLTAGE
FM TUNING VOLTAGE
VT
G
TP2
L104
TC102
L104,TC102
AM TRACKING
AM RF AMP Q106
AFC
AM RF
OSC/FMSD
SFR101
FM TUNED LEVEL
L.P.F Q107,108
MUTE
TU LED
AM/FM
SMET
PH DET
PL DET
AGC CONT. Q109
STEREO
DO
X201 7.2MHz
Q105
B+
B+
PD 1
X IN
X OUT
FM B+
FM IN
PLL IC201
AM IN
SD/IN
L CTR
H CTR
SD
AM/FM
ST/MONO
DO
CE
DI
CLK

- R CH is omitted
- Signal path
  ⇨ : FM
  ➡ : AM
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

09

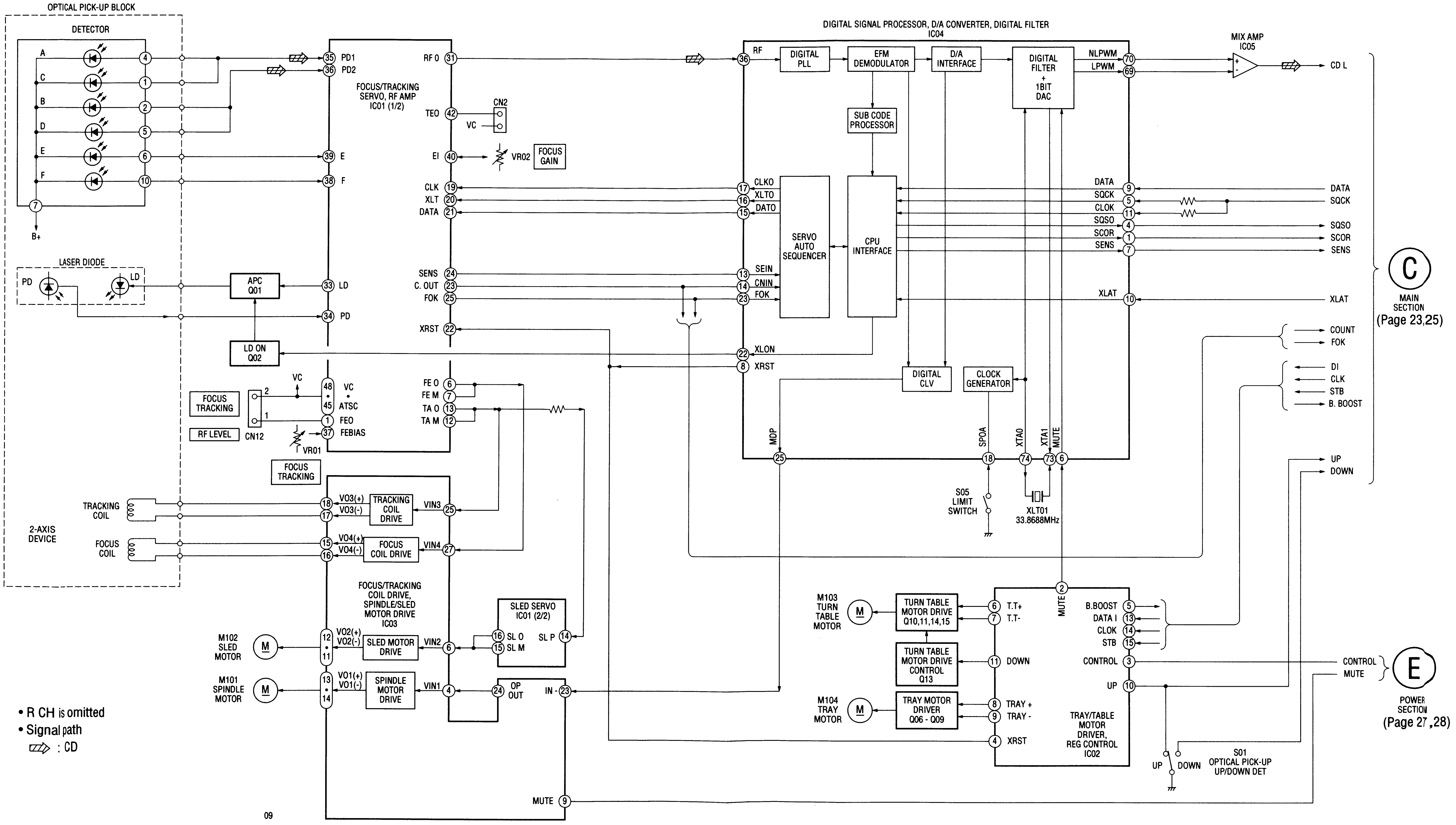
—TUNER SECTION— (AEP, UK models)


JK101
ANTENNA
FM
75 OHM
AM
L101
RF IN
IF OUT
U1
FM FRONT
END
VT
OSC
CF101
10.7MHz
FM IF
AMP
Q101
CF102
10.7MHz
FM IF
FM/AM MPX
IC102
L OUT
R OUT
TU L
R CH
AM IF
CF104
10.7MHz
FM DET
MPX VCO
CF105
19kHz
TP1
IF
G
MPX IN
T101
FTZ. FILTER
AM/FM
ST IND
ST IND
AM MIX
T102
CF103
450kHz
DI
CLK
CE
A
MAIN
SECTION
(Page 25)
TP2
AM TUNING
VOLTAGE
TP2
AM TUNING
VOLTAGE
L105
OSC
L104
TC102
L104,TC102
AM TRACKING
AM RF
AMP
Q106
AFC
AM RF
OSC/FMSD
SFR101
FM
TUNED
LEVEL
MUTE
L.P.F
Q107,108
TU LED
AM/FM
SMET
PH DET
PH DET
PL DET
STEREO
DO
X201
7.2MHz
Q105
B+
B+
PD 1
X IN
X OUT
FM B+
FM IN
PLL
IC201
AM IN
SD/IN
L CTR
H CTR
SD
AM/FM
ST/MONO
DO
CE
DI
CLK

- R CH is omitted
- Signal path
  ⇨: FM
  ➡: AM

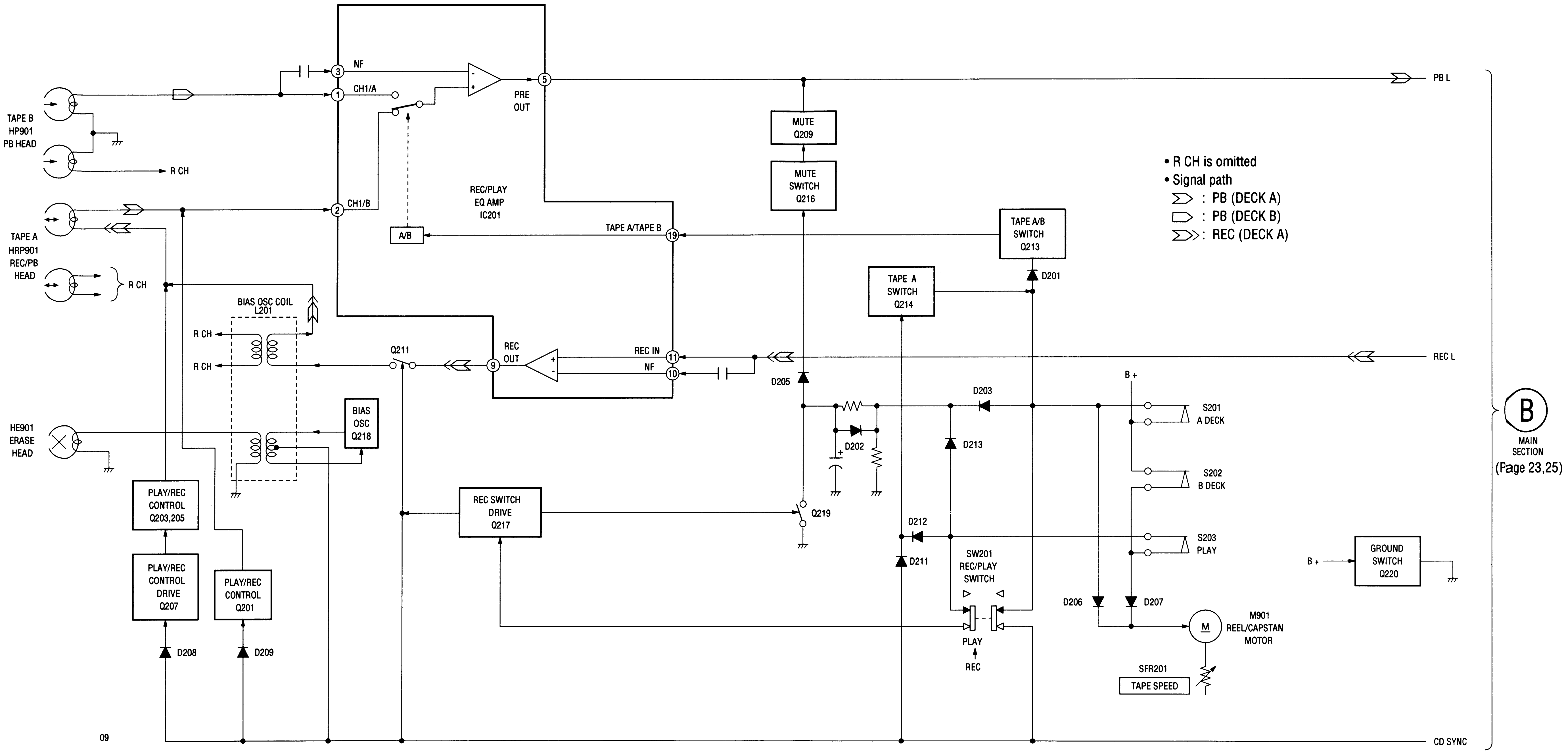
09

— CD SECTION —

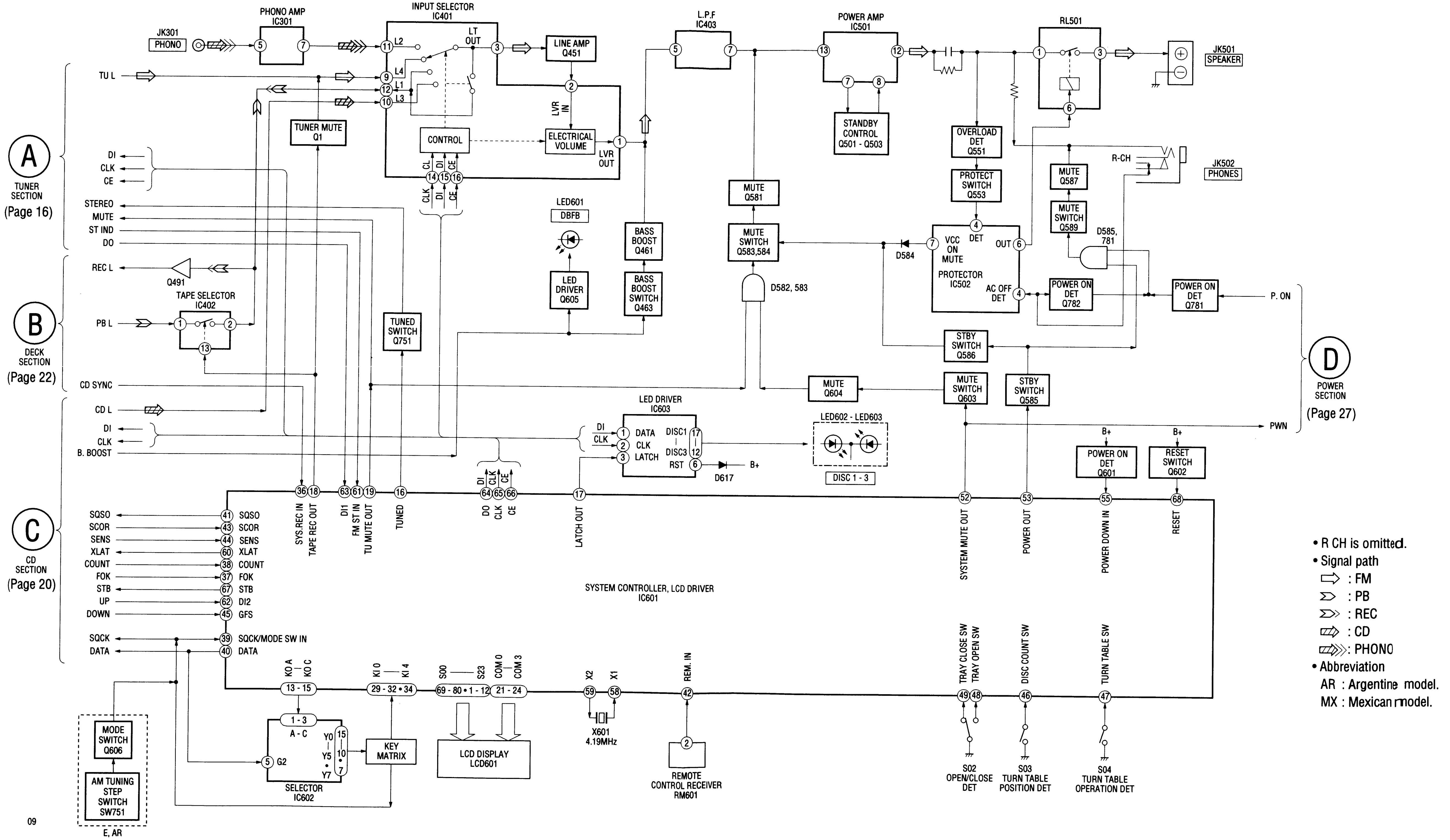

OPTICAL PICK-UP BLOCK
DETECTOR
A
C
B
D
E
F
B+
LASER DIODE
PD
LD
APC Q01
LD ON Q02
2-AXIS DEVICE
TRACKING COIL
FOCUS COIL
PD1
PD2
FOCUS/TRACKING SERVO, RF AMP IC01 (1/2)
RF O
TEO
CN2
VC
EI
VR02
FOCUS GAIN
CLK
XLT
DATA
SENS
C. OUT
FOK
XRST
LD
PD
VC
ATSC
FEO
FEBIAS
VR01
FOCUS TRACKING
RF LEVEL
CN12
FE O
FE M
TA O
TA M
VO3(+)
VO3(-)
TRACKING COIL DRIVE
VIN3
VO4(+)
VO4(-)
FOCUS COIL DRIVE
VIN4
FOCUS/TRACKING COIL DRIVE, SPINDLE/SLED MOTOR DRIVE IC03
M102 SLED MOTOR
VO2(+)
VO2(-)
SLED MOTOR DRIVE
VIN2
M101 SPINDLE MOTOR
VO1(+)
VO1(-)
SPINDLE MOTOR DRIVE
VIN1
SLED SERVO IC01 (2/2)
SL O
SL M
SL P
OP OUT
IN -
MUTE
09
DIGITAL SIGNAL PROCESSOR, D/A CONVERTER, DIGITAL FILTER IC04
RF
DIGITAL PLL
EFM DEMODULATOR
D/A INTERFACE
DIGITAL FILTER + 1BIT DAC
NLPWM
LPWM
SUB CODE PROCESSOR
CLKO
XLTO
DATO
SERVO AUTO SEQUENCER
CPU INTERFACE
SEIN
CNIN
FOK
XLON
XRST
DATA
SQCK
CLOK
SQSO
SCOR
SENS
XLAT
DIGITAL CLV
CLOCK GENERATOR
MDP
SPOA
XTAO
XTA1
MUTE
S05 LIMIT SWITCH
XLT01 33.8688MHz
MIX AMP IC05
CD L
DATA
SQCK
SQSO
SCOR
SENS
XLAT
COUNT
FOK
DI
CLK
STB
B. BOOST
UP
DOWN
C
MAIN SECTION
(Page 23,25)
M103 TURN TABLE MOTOR
TURN TABLE MOTOR DRIVE Q10,11,14,15
TURN TABLE MOTOR DRIVE CONTROL Q13
M104 TRAY MOTOR
TRAY MOTOR DRIVER Q06 - Q09
T.T+
T.T-
DOWN
TRAY +
TRAY -
XRST
MUTE
B.BOOST
DATA I
CLOK
STB
CONTROL
UP
TRAY/TABLE MOTOR DRIVER, REG CONTROL IC02
UP
DOWN
S01 OPTICAL PICK-UP UP/DOWN DET
CONTROL
MUTE
E
POWER SECTION
(Page 27,28)

- R CH is omitted
- Signal path
  : CD

— DECK SECTION —


TAPE B
HP901
PB HEAD
R CH
TAPE A
HRP901
REC/PB
HEAD
R CH
HE901
ERASE
HEAD
NF
CH1/A
CH1/B
PRE
OUT
REC/PLAY
EQ AMP
IC201
A/B
TAPE A/TAPE B
REC
OUT
REC IN
NF
BIAS OSC COIL
L201
R CH
R CH
Q211
BIAS
OSC
Q218
PLAY/REC
CONTROL
Q203,205
PLAY/REC
CONTROL
DRIVE
Q207
PLAY/REC
CONTROL
Q201
D208
D209
REC SWITCH
DRIVE
Q217
MUTE
Q209
MUTE
SWITCH
Q216
D205
Q219
TAPE A
SWITCH
Q214
TAPE A/B
SWITCH
Q213
D201
D202
D203
D213
D212
D211
SW201
REC/PLAY
SWITCH
PLAY
REC
B +
S201
A DECK
S202
B DECK
S203
PLAY
D206
D207
M
M901
REEL/CAPSTAN
MOTOR
SFR201
TAPE SPEED
B +
GROUND
SWITCH
Q220
• R CH is omitted
• Signal path
: PB (DECK A)
: PB (DECK B)
: REC (DECK A)
PB L
REC L
CD SYNC
B
MAIN
SECTION
(Page 23,25)
09

— MAIN SECTION — (E, AR, MX models)


JK301
PHONO
PHONO AMP
IC301
INPUT SELECTOR
IC401
LT OUT
L2
L4
L1
L3
LINE AMP
Q451
LVR IN
ELECTRICAL VOLUME
LVR OUT
CONTROL
CL DI CE
CLK DI CE
TUNER MUTE
Q1
L.P.F
IC403
POWER AMP
IC501
STANDBY CONTROL
Q501 - Q503
RL501
JK501
SPEAKER
JK502
PHONES
R-CH
OVERLOAD DET
Q551
PROTECT SWITCH
Q553
MUTE
Q587
MUTE SWITCH
Q589
D585, 781
VCC ON MUTE
DET
OUT
PROTECTOR
IC502
AC OFF DET
D584
POWER ON DET
Q782
POWER ON DET
Q781
P. ON
MUTE
Q581
MUTE SWITCH
Q583,584
D582, 583
BASS BOOST
Q461
BASS BOOST SWITCH
Q463
LED601
DBFB
LED DRIVER
Q605
TUNED SWITCH
Q751
STBY SWITCH
Q586
MUTE SWITCH
Q603
STBY SWITCH
Q585
MUTE
Q604
PWN
B+
POWER ON DET
Q601
RESET SWITCH
Q602
A
TUNER SECTION
(Page 16)
TU L
DI
CLK
CE
STEREO
MUTE
ST IND
DO
B
DECK SECTION
(Page 22)
REC L
Q491
TAPE SELECTOR
IC402
PB L
CD SYNC
C
CD SECTION
(Page 20)
CD L
DI
CLK
B. BOOST
D
POWER SECTION
(Page 27)
LED DRIVER
IC603
DI
CLK
DATA
CLK
LATCH
DISC1
DISC3
RST
D617
LED602 - LED603
DISC 1 - 3
SYS.REC IN
TAPE REC OUT
DI1
FM ST IN
TU MUTE OUT
TUNED
DO
CLK
CE
LATCH OUT
SYSTEM MUTE OUT
POWER OUT
POWER DOWN IN
RESET
SQSO
SCOR
SENS
XLAT
COUNT
FOK
STB
UP
DOWN
DI2
GFS
SQCK
DATA
SQCK/MODE SW IN
SYSTEM CONTROLLER, LCD DRIVER
IC601
KO A
KO C
KI 0
KI 4
S00
S23
COM 0
COM 3
X2
X1
REM. IN
TRAY CLOSE SW
TRAY OPEN SW
DISC COUNT SW
TURN TABLE SW
13 - 15
29 - 32 • 34
69 - 80 • 1 - 12
21 - 24
1 - 3
A - C
Y0
Y5
Y7
G2
SELECTOR
IC602
KEY MATRIX
LCD DISPLAY
LCD601
X601
4.19MHz
REMOTE CONTROL RECEIVER
RM601
S02
OPEN/CLOSE DET
S03
TURN TABLE POSITION DET
S04
TURN TABLE OPERATION DET
MODE SWITCH
Q606
AM TUNING STEP SWITCH
SW751
E, AR
09

- R CH is omitted.
- Signal path

⇨ : FM

≫ : PB

≫› : REC

▨⇨ : CD

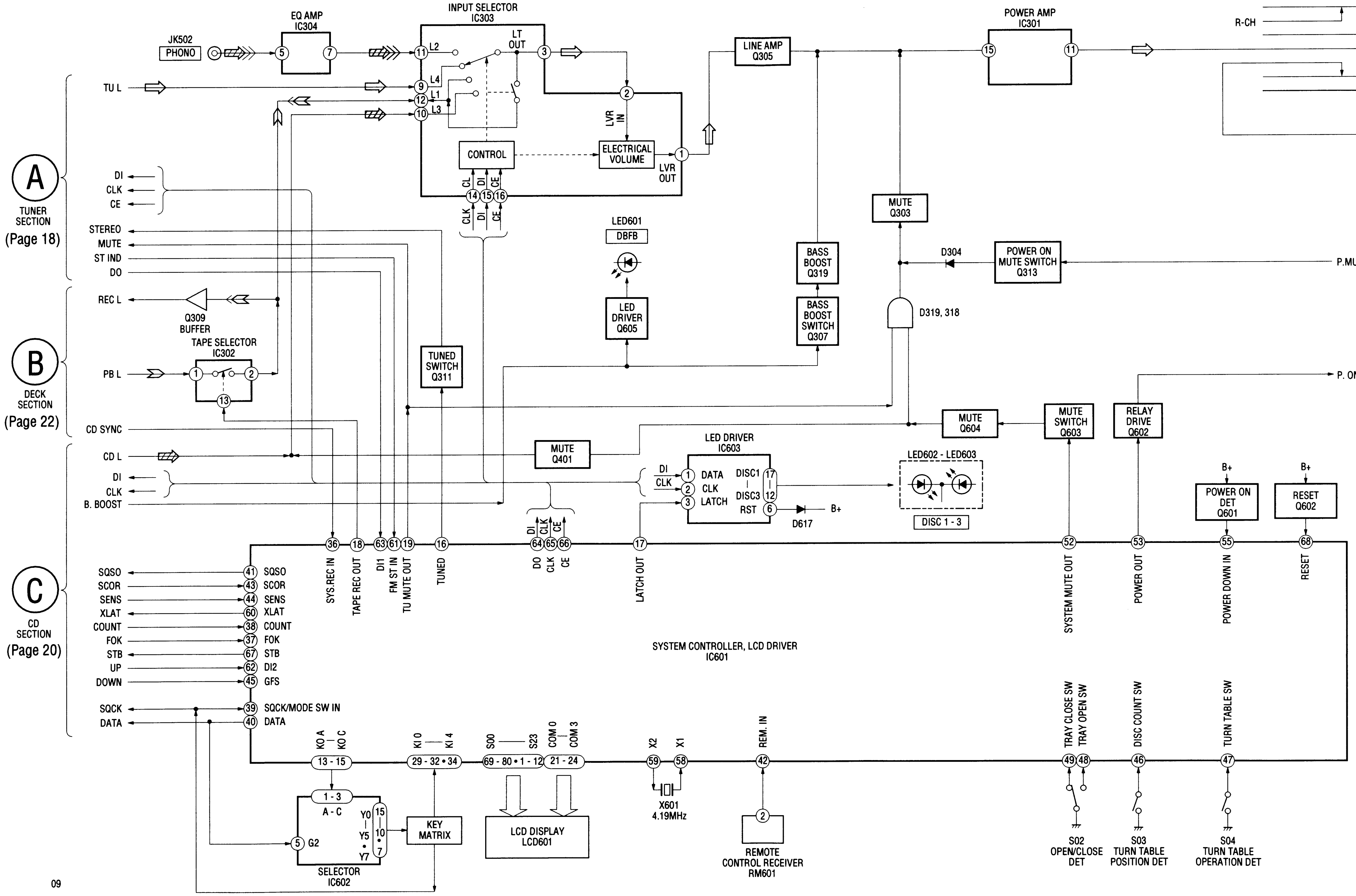
▨≫: PHONO

- Abbreviation

AR : Argentine model.

MX : Mexican model.

— MAIN SECTION — (AEP, UK models)

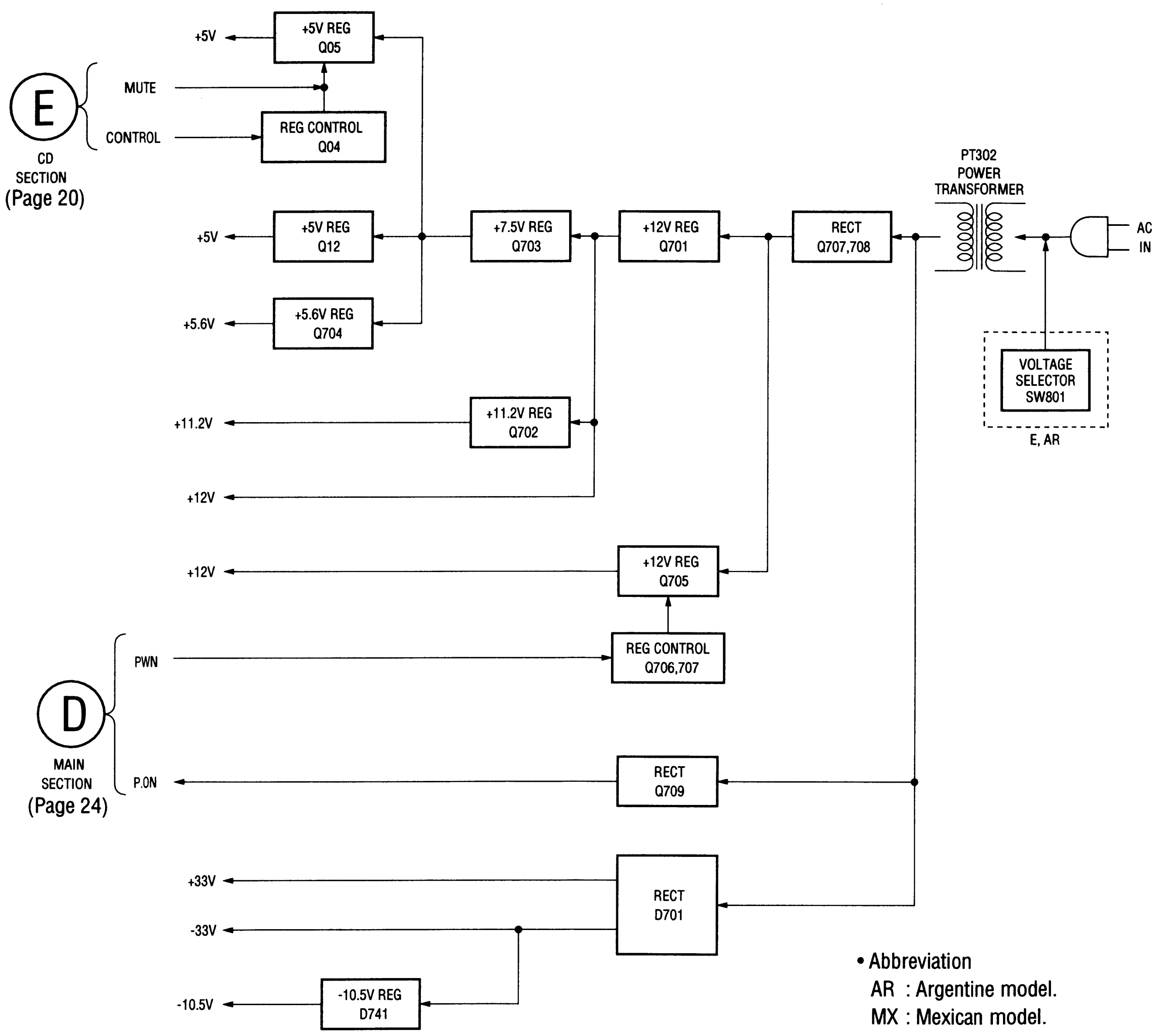


JK502
PHONO
EQ AMP
IC304
INPUT SELECTOR
IC303
L2
LT OUT
L4
L1
L3
CONTROL
ELECTRICAL VOLUME
LVR IN
LVR OUT
CL DI CE
CLK DI CE
LINE AMP
Q305
POWER AMP
IC301
R-CH
JK302
PHONES
JK301
SPEAKER
TU L
A
TUNER SECTION
(Page 18)
DI
CLK
CE
STEREO
MUTE
ST IND
DO
REC L
Q309
BUFFER
TAPE SELECTOR
IC302
B
DECK SECTION
(Page 22)
PB L
CD SYNC
CD L
DI
CLK
B. BOOST
C
CD SECTION
(Page 20)
LED601
DBFB
LED DRIVER
Q605
TUNED SWITCH
Q311
BASS BOOST
Q319
BASS BOOST SWITCH
Q307
MUTE
Q303
D304
POWER ON MUTE SWITCH
Q313
P.MUTE
D319, 318
D
POWER SECTION
(Page 28)
P. ON/OFF
RELAY DRIVE
Q602
MUTE SWITCH
Q603
MUTE
Q604
MUTE
Q401
LED DRIVER
IC603
DATA
CLK
LATCH
DISC1
DISC3
RST
D617
B+
LED602 - LED603
DISC 1 - 3
POWER ON DET
Q601
RESET
Q602
B+
SYS.REC IN
TAPE REC OUT
DI1
FM ST IN
TU MUTE OUT
TUNED
DO
CLK
CE
LATCH OUT
SYSTEM MUTE OUT
POWER OUT
POWER DOWN IN
RESET
SQSO
SCOR
SENS
XLAT
COUNT
FOK
STB
UP
DOWN
SQSO
SCOR
SENS
XLAT
COUNT
FOK
STB
DI2
GFS
SQCK
DATA
SQCK/MODE SW IN
DATA
SYSTEM CONTROLLER, LCD DRIVER
IC601
KO A — KO C
KI 0 — KI 4
S00 — S23
COM 0 — COM 3
X2
X1
REM. IN
TRAY CLOSE SW
TRAY OPEN SW
DISC COUNT SW
TURN TABLE SW
13 - 15
29 - 32 • 34
69 - 80 • 1 - 12
21 - 24
1 - 3
A - C
Y0
Y5
Y7
G2
SELECTOR
IC602
KEY MATRIX
LCD DISPLAY
LCD601
X601
4.19MHz
REMOTE CONTROL RECEIVER
RM601
S02
OPEN/CLOSE DET
S03
TURN TABLE POSITION DET
S04
TURN TABLE OPERATION DET
09

- R CH is omitted.
- Signal path

⇨ : FM
ᐳ : PB
ᐳᐳ : REC
▨⇨ : CD
▨⇨ᐳ : PHONO

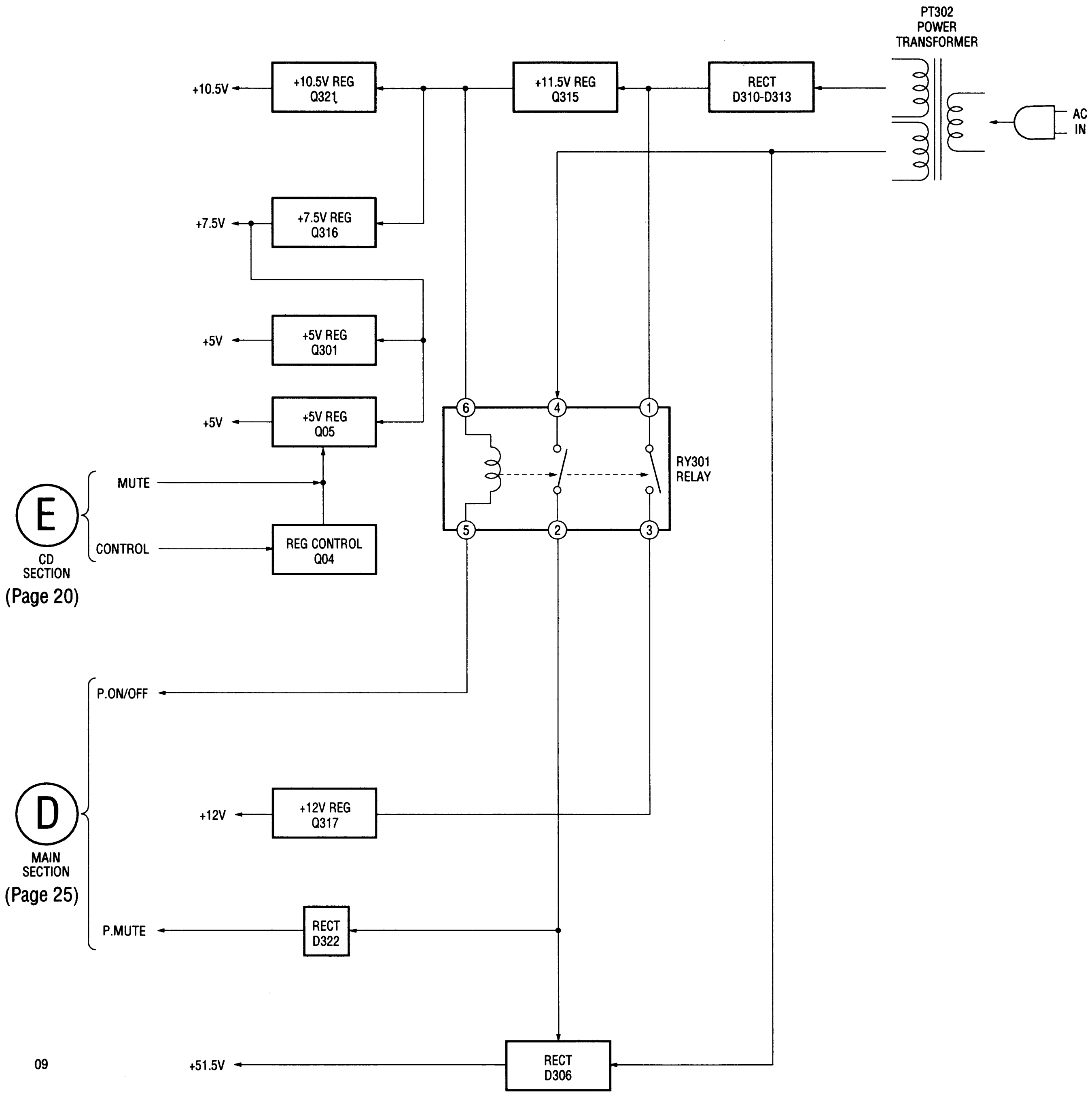
— POWER SECTION — (E, AR, MX models)


+5V
+5V REG
Q05
E
MUTE
CONTROL
REG CONTROL
Q04
CD
SECTION
(Page 20)
+5V
+5V REG
Q12
+7.5V REG
Q703
+12V REG
Q701
RECT
Q707,708
PT302
POWER
TRANSFORMER
AC
IN
+5.6V
+5.6V REG
Q704
VOLTAGE
SELECTOR
SW801
E, AR
+11.2V
+11.2V REG
Q702
+12V
+12V
+12V REG
Q705
PWN
REG CONTROL
Q706,707
D
MAIN
SECTION
(Page 24)
P.ON
RECT
Q709
+33V
-33V
RECT
D701
-10.5V
-10.5V REG
D741

- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

09

— POWER SECTION — (AEP, UK models)

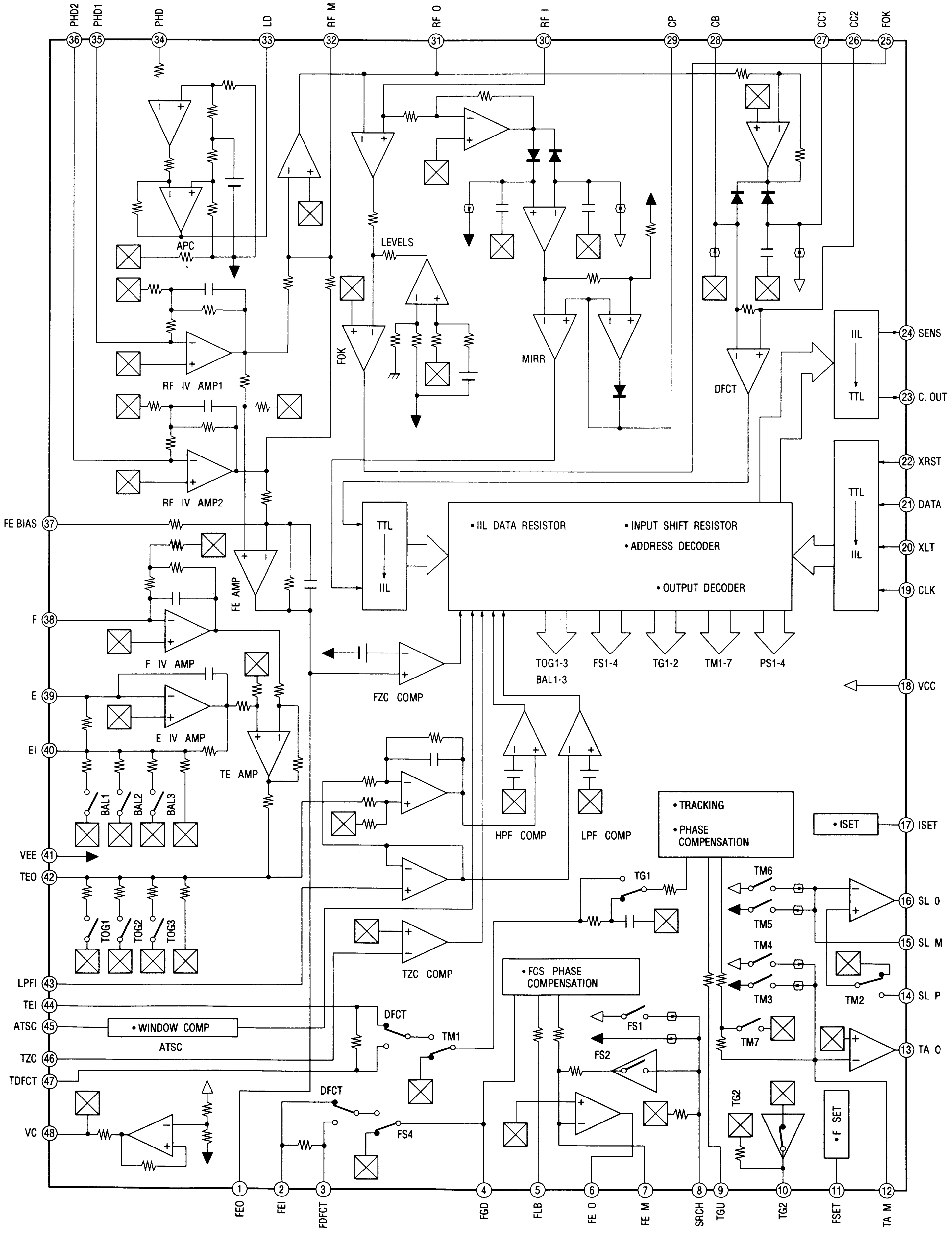

PT302
POWER
TRANSFORMER
+10.5V
+10.5V REG
Q321
+11.5V REG
Q315
RECT
D310-D313
AC
IN
+7.5V
+7.5V REG
Q316
+5V
+5V REG
Q301
+5V
+5V REG
Q05
6
4
1
RY301
RELAY
5
2
3
E
MUTE
CONTROL
REG CONTROL
Q04
CD
SECTION
(Page 20)
P.ON/OFF
D
+12V
+12V REG
Q317
MAIN
SECTION
(Page 25)
P.MUTE
RECT
D322
+51.5V
RECT
D306

09

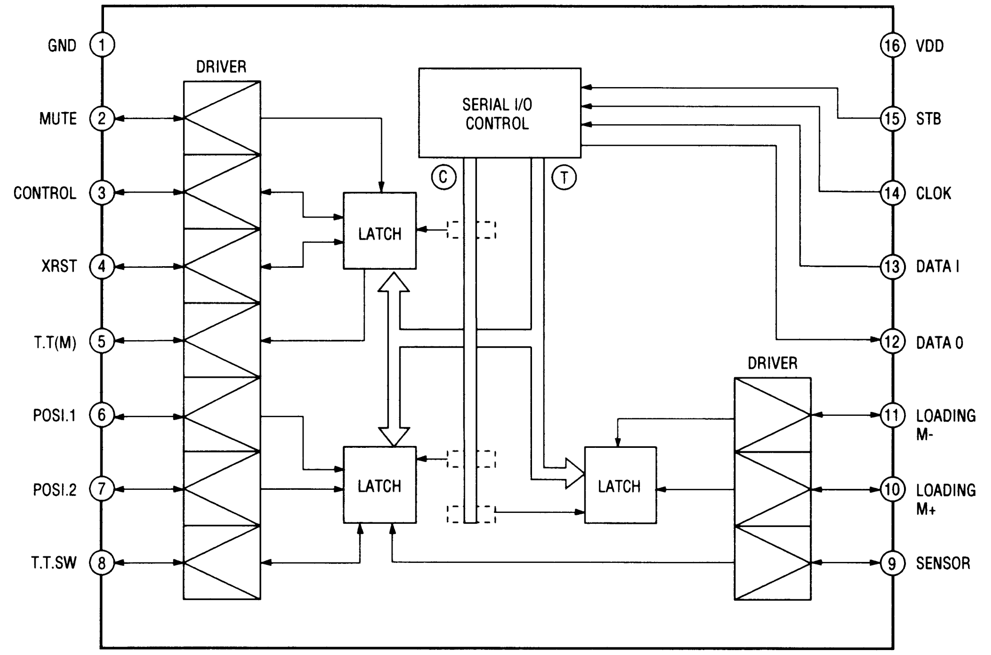
5-3. IC BLOCK DIAGRAMS

— CD SECTION —

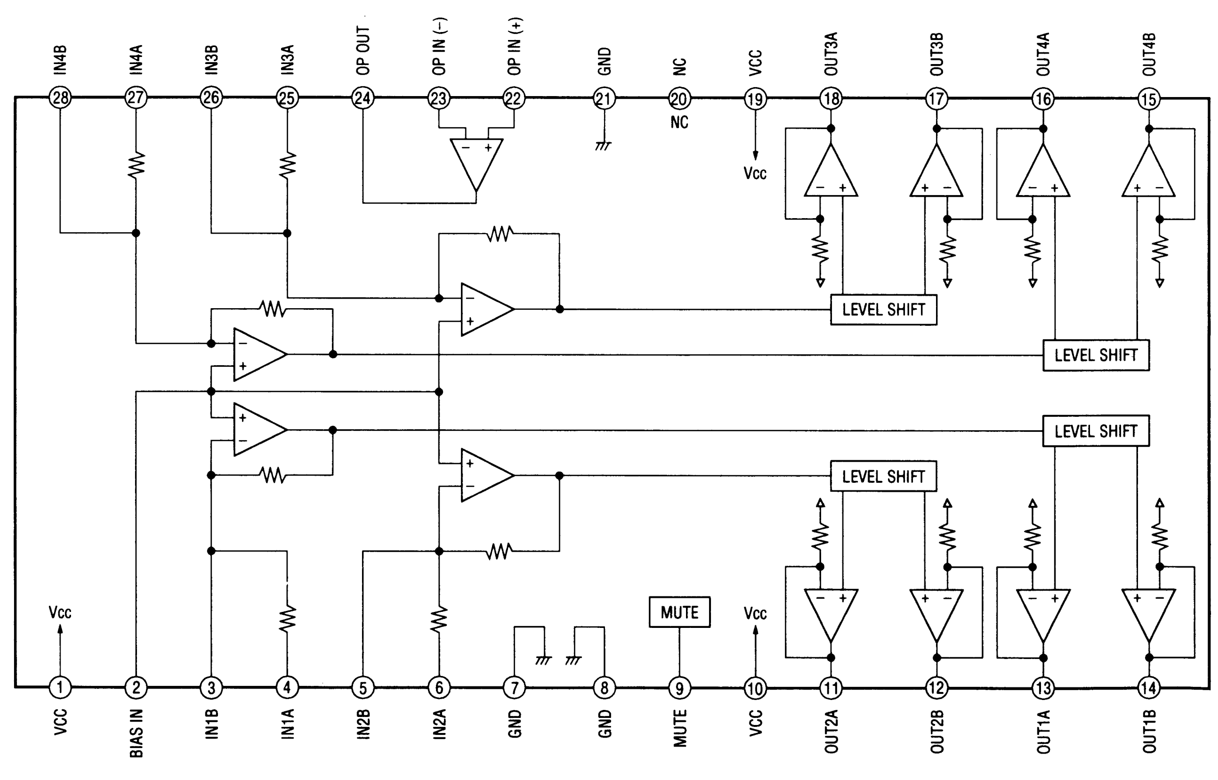
IC01 CXA1782BQ


PHD2 36
PHD1 35
PHD 34
LD 33
RF M 32
RF O 31
RF I 30
CP 29
CB 28
CC1 27
CC2 26
FOK 25
APC
RF IV AMP1
RF IV AMP2
LEVELS
FOK
MIRR
DFCT
IIL
TTL
24 SENS
23 C. OUT
22 XRST
21 DATA
20 XLT
19 CLK
18 VCC
17 ISET
16 SL O
15 SL M
14 SL P
13 TA O
FE BIAS 37
F 38
E 39
EI 40
VEE 41
TEO 42
LPFI 43
TEI 44
ATSC 45
TZC 46
TDFCT 47
VC 48
FE AMP
F IV AMP
E IV AMP
TE AMP
BAL1
BAL2
BAL3
TOG1
TOG2
TOG3
• IIL DATA RESISTOR
• INPUT SHIFT RESISTOR
• ADDRESS DECODER
• OUTPUT DECODER
TOG1-3
BAL1-3
FS1-4
TG1-2
TM1-7
PS1-4
FZC COMP
HPF COMP
LPF COMP
TZC COMP
• TRACKING
• PHASE COMPENSATION
• ISET
• WINDOW COMP
ATSC
DFCT
TM1
• FCS PHASE COMPENSATION
TG1
TM6
TM5
TM4
TM3
TM2
TM7
FS1
FS2
FS4
TG2
• F SET
1 FEO
2 FEI
3 FDFCT
4 FGD
5 FLB
6 FE O
7 FE M
8 SRCH
9 TGU
10 TG2
11 FSET
12 TA M

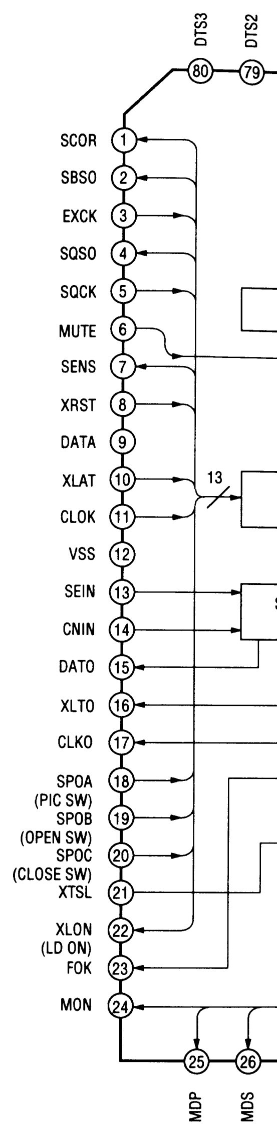
IC02 TC9173P


GND 1
MUTE 2
CONTROL 3
XRST 4
T.T(M) 5
POSI.1 6
POSI.2 7
T.T.SW 8
DRIVER
SERIAL I/O CONTROL
C
T
LATCH
LATCH
LATCH
DRIVER
16 VDD
15 STB
14 CLOK
13 DATA I
12 DATA O
11 LOADING M-
10 LOADING M+
9 SENSOR

IC03 BA5941FP

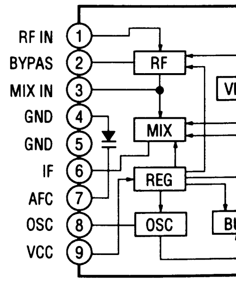

IN4B 28
IN4A 27
IN3B 26
IN3A 25
OP OUT 24
OP IN (-) 23
OP IN (+) 22
GND 21
NC 20
NC
VCC 19
Vcc
OUT3A 18
OUT3B 17
OUT4A 16
OUT4B 15
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
MUTE
Vcc
Vcc
1 VCC
2 BIAS IN
3 IN1B
4 IN1A
5 IN2B
6 IN2A
7 GND
8 GND
9 MUTE
10 VCC
11 OUT2A
12 OUT2B
13 OUT1A
14 OUT1B

IC04 CXD250

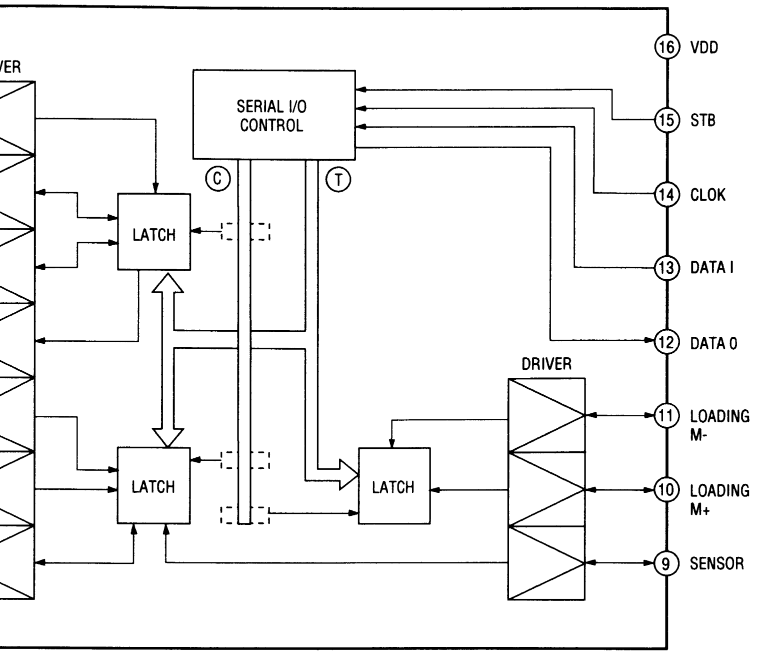

DTS3 80
DTS2 79
SCOR 1
SBSO 2
EXCK 3
SQSO 4
SQCK 5
MUTE 6
SENS 7
XRST 8
DATA 9
XLAT 10
CLOK 11
VSS 12
SEIN 13
CNIN 14
DATO 15
XLTO 16
CLKO 17
SPOA (PIC SW) 18
SPOB (OPEN SW) 19
SPOC (CLOSE SW) 20
XTSL 21
XLON (LD ON) 22
FOK 23
MON 24
13
25 MDP
26 MDS

— TUNER SECTION —

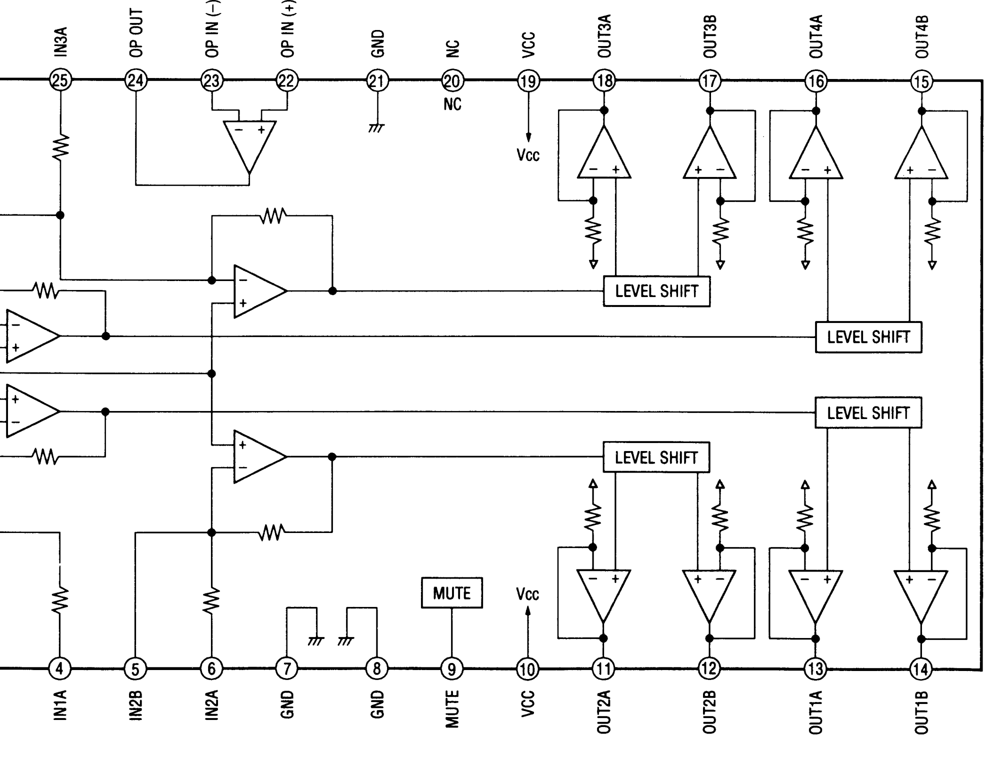
IC101 LA118


RF IN 1
BYPAS 2
MIX IN 3
GND 4
GND 5
IF 6
AFC 7
OSC 8
VCC 9
RF
MIX
REG
OSC

73P

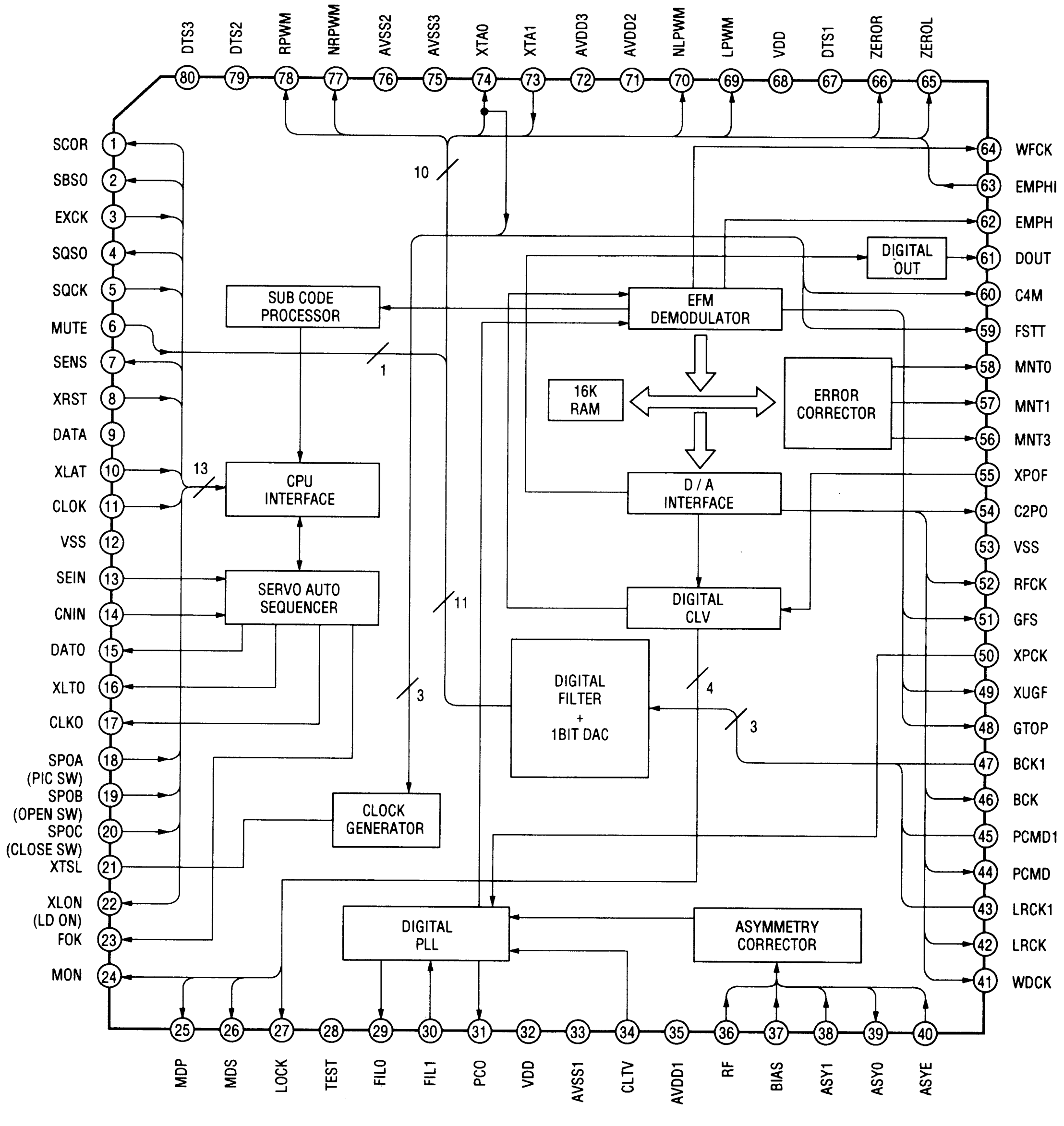


VER
SERIAL I/O CONTROL
C
T
LATCH
LATCH
LATCH
DRIVER
16 VDD
15 STB
14 CLOK
13 DATA I
12 DATA O
11 LOADING M-
10 LOADING M+
9 SENSOR



IN3A 25
OP OUT 24
OP IN (-) 23
OP IN (+) 22
GND 21
NC 20 NC
VCC 19 Vcc
OUT3A 18
OUT3B 17
OUT4A 16
OUT4B 15
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
LEVEL SHIFT
MUTE
Vcc
4 IN1A
5 IN2B
6 IN2A
7 GND
8 GND
9 MUTE
10 VCC
11 OUT2A
12 OUT2B
13 OUT1A
14 OUT1B

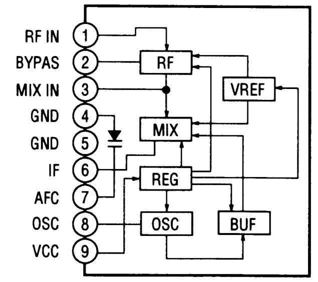
IC04 CXD2508Q



80 DTS3
79 DTS2
78 RPWM
77 NRPWM
76 AVSS2
75 AVSS3
74 XTAO
73 XTA1
72 AVDD3
71 AVDD2
70 NLPWM
69 LPWM
68 VDD
67 DTS1
66 ZEROR
65 ZEROL
SCOR 1
SBSO 2
EXCK 3
SQSO 4
SQCK 5
MUTE 6
SENS 7
XRST 8
DATA 9
XLAT 10
CLOK 11
VSS 12
SEIN 13
CNIN 14
DATO 15
XLTO 16
CLKO 17
SPOA (PIC SW) 18
SPOB (OPEN SW) 19
SPOC (CLOSE SW) 20
XTSL 21
XLON (LD ON) 22
FOK 23
MON 24
64 WFCK
63 EMPHI
62 EMPH
61 DOUT
60 C4M
59 FSTT
58 MNT0
57 MNT1
56 MNT3
55 XPOF
54 C2PO
53 VSS
52 RFCK
51 GFS
50 XPCK
49 XUGF
48 GTOP
47 BCK1
46 BCK
45 PCMD1
44 PCMD
43 LRCK1
42 LRCK
41 WDCK
25 MDP
26 MDS
27 LOCK
28 TEST
29 FIL0
30 FIL1
31 PCO
32 VDD
33 AVSS1
34 CLTV
35 AVDD1
36 RF
37 BIAS
38 ASY1
39 ASY0
40 ASYE
SUB CODE PROCESSOR
EFM DEMODULATOR
DIGITAL OUT
16K RAM
ERROR CORRECTOR
CPU INTERFACE
D / A INTERFACE
SERVO AUTO SEQUENCER
DIGITAL CLV
DIGITAL FILTER + 1BIT DAC
CLOCK GENERATOR
DIGITAL PLL
ASYMMETRY CORRECTOR
10
1
13
11
3
4
3

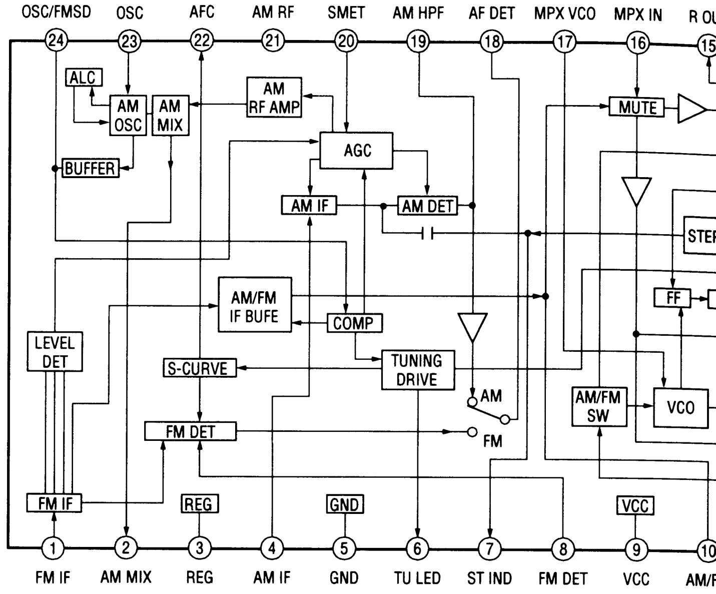
— TUNER SECTION —

IC101 LA1186N



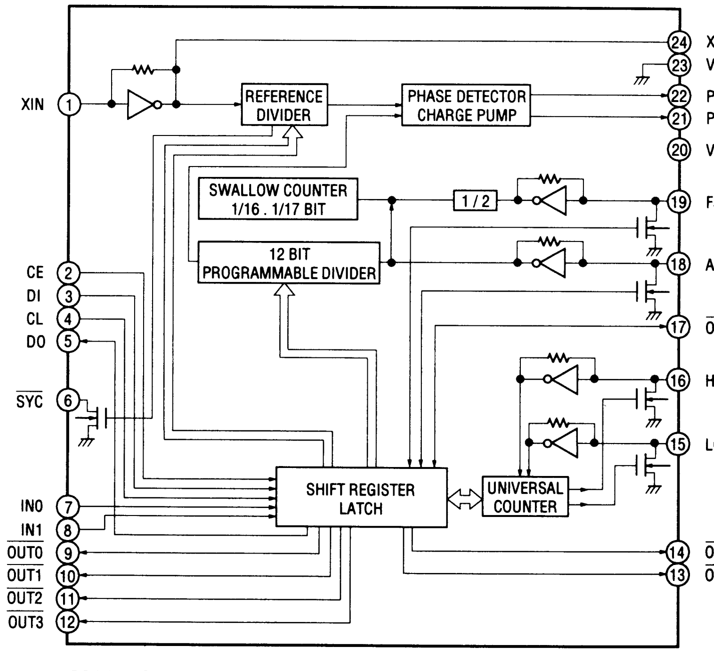
RF IN 1
BYPAS 2
MIX IN 3
GND 4
GND 5
IF 6
AFC 7
OSC 8
VCC 9
RF
VREF
MIX
REG
OSC
BUF

IC102 LA1831



OSC/FMSD 24
OSC 23
AFC 22
AM RF 21
SMET 20
AM HPF 19
AF DET 18
MPX VCO 17
MPX IN 16
R OU 15
ALC
AM OSC
AM MIX
BUFFER
AM RF AMP
AGC
MUTE
AM IF
AM DET
STE
AM/FM IF BUFE
COMP
FF
LEVEL DET
S-CURVE
TUNING DRIVE
AM
FM
AM/FM SW
VCO
FM DET
FM IF
REG
GND
VCC
1 FM IF
2 AM MIX
3 REG
4 AM IF
5 GND
6 TU LED
7 ST IND
8 FM DET
9 VCC
10 AM/F

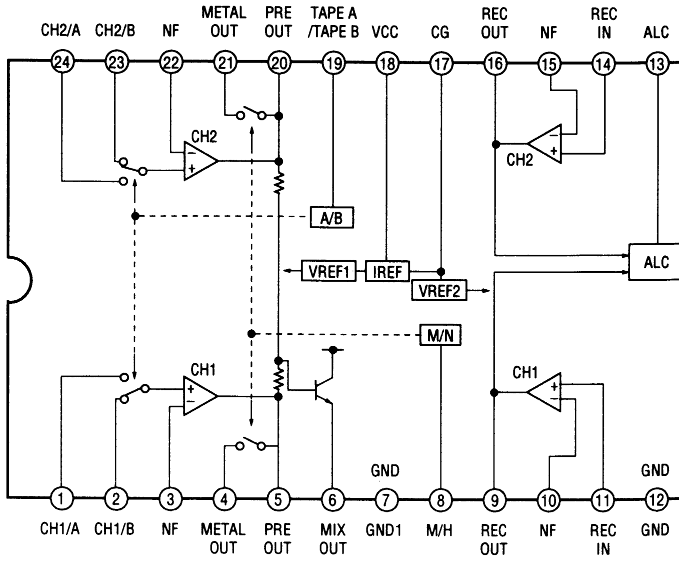
IC201 LC7218



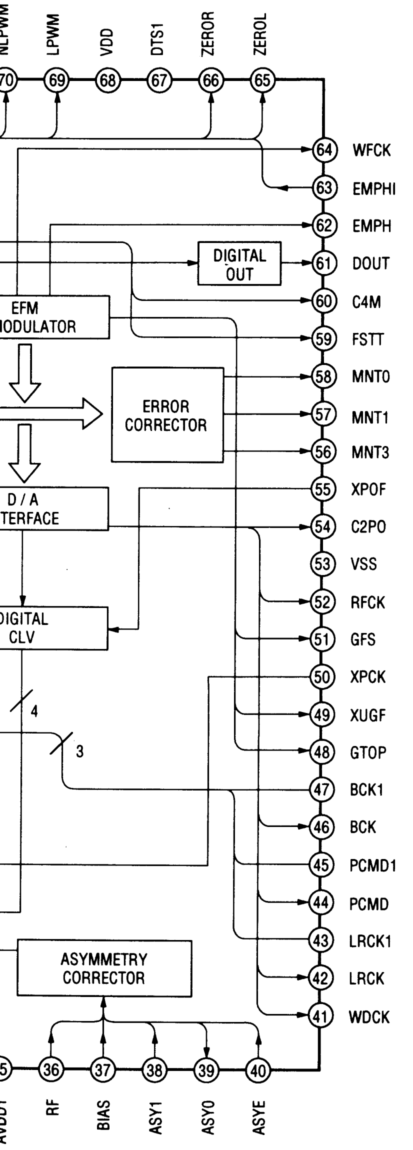
XIN 1
CE 2
DI 3
CL 4
DO 5
SYC 6
INO 7
IN1 8
OUT0 9
OUT1 10
OUT2 11
OUT3 12
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16 . 1/17 BIT
1/2
12 BIT PROGRAMMABLE DIVIDER
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
24 X
23 V
22 P
21 P
20 V
19 F
18 A
17 O
16 H
15 L
14 O
13 O

— MAIN SECTION —

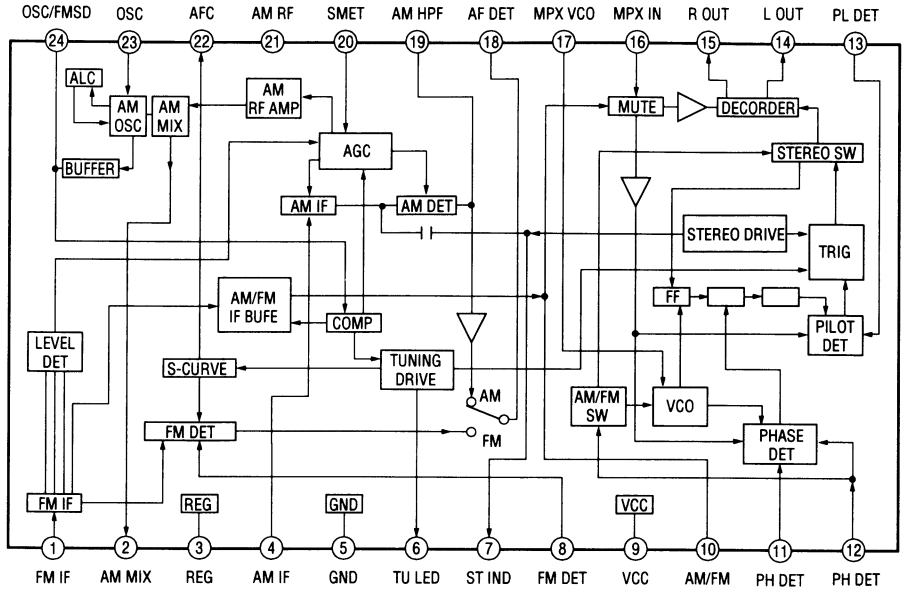
IC201 TA8189N



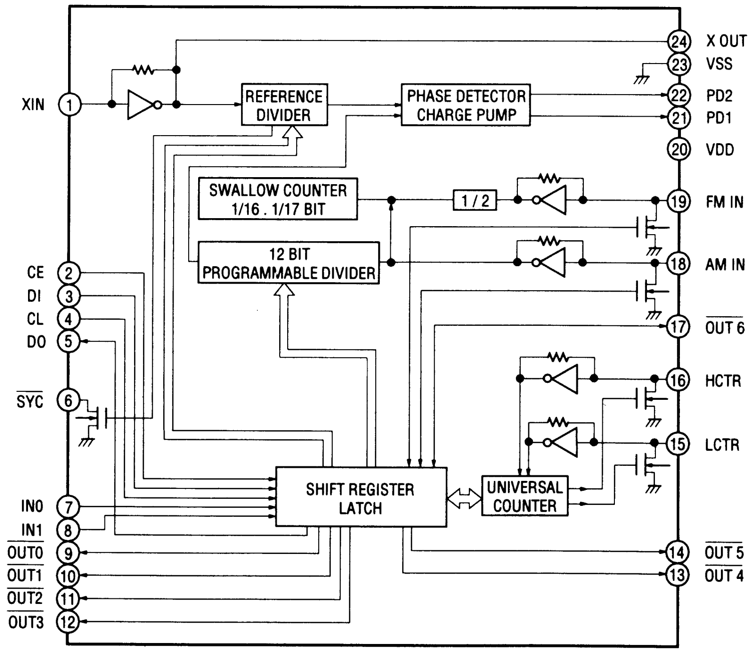
CH2/A 24
CH2/B 23
NF 22
METAL OUT 21
PRE OUT 20
TAPE A /TAPE B 19
VCC 18
CG 17
REC OUT 16
NF 15
REC IN 14
ALC 13
CH2
A/B
VREF1
IREF
VREF2
M/N
CH1
CH2
ALC
CH1
GND
GND
1 CH1/A
2 CH1/B
3 NF
4 METAL OUT
5 PRE OUT
6 MIX OUT
7 GND1
8 M/H
9 REC OUT
10 NF
11 REC IN
12 GND


LPWM
VDD
DTS1
ZEROR
ZEROL
70
69
68
67
66
65
64 WFCK
63 EMPHI
62 EMPH
61 DOUT
60 C4M
59 FSTT
58 MNT0
57 MNT1
56 MNT3
55 XPOF
54 C2PO
53 VSS
52 RFCK
51 GFS
50 XPCK
49 XUGF
48 GTOP
47 BCK1
46 BCK
45 PCMD1
44 PCMD
43 LRCK1
42 LRCK
41 WDCK
DIGITAL OUT
EFM
ODULATOR
ERROR CORRECTOR
D / A
TERFACE
DIGITAL
CLV
4
3
ASYMMETRY CORRECTOR
36 37 38 39 40
RF
BIAS
ASY1
ASY0
ASYE

IC102 LA1831

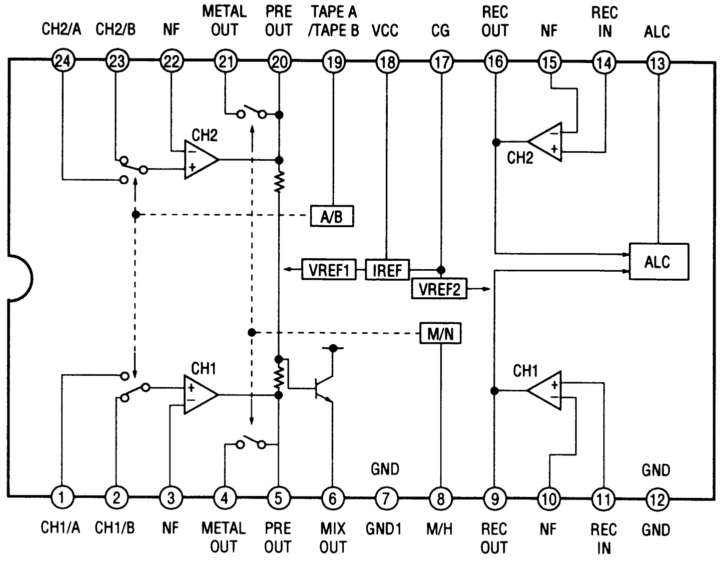

OSC/FMSD 24
OSC 23
AFC 22
AM RF 21
SMET 20
AM HPF 19
AF DET 18
MPX VCO 17
MPX IN 16
R OUT 15
L OUT 14
PL DET 13
ALC
AM OSC
AM MIX
AM RF AMP
BUFFER
AGC
AM IF
AM DET
MUTE
DECORDER
STEREO SW
STEREO DRIVE
TRIG
AM/FM IF BUFE
COMP
FF
PILOT DET
LEVEL DET
S-CURVE
TUNING DRIVE
AM
FM
AM/FM SW
VCO
PHASE DET
FM DET
FM IF
REG
GND
VCC
1 FM IF
2 AM MIX
3 REG
4 AM IF
5 GND
6 TU LED
7 ST IND
8 FM DET
9 VCC
10 AM/FM
11 PH DET
12 PH DET

IC201 LC7218

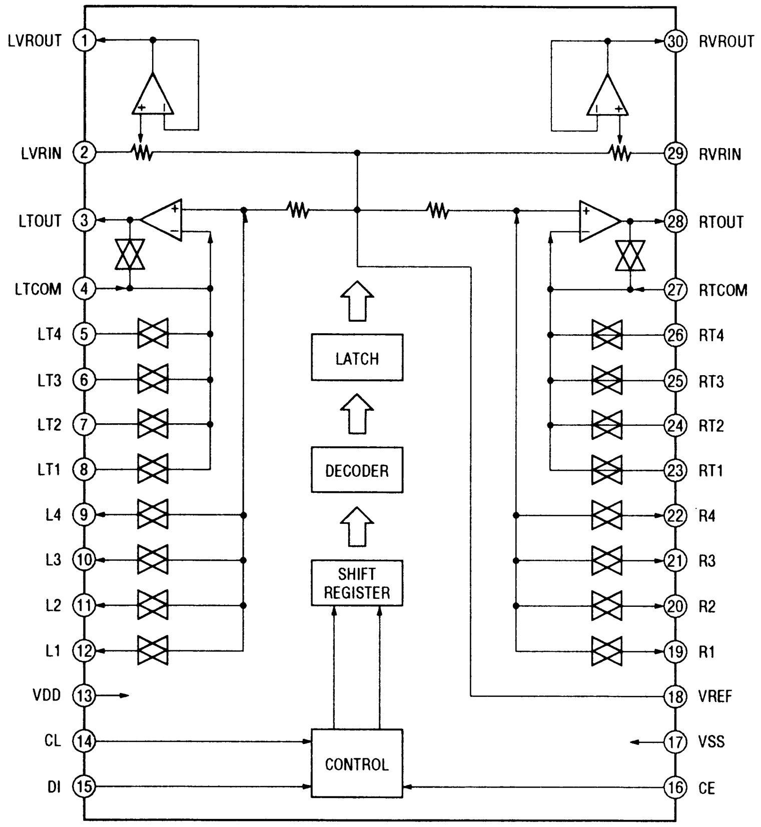

XIN 1
REFERENCE DIVIDER
PHASE DETECTOR CHARGE PUMP
SWALLOW COUNTER 1/16 . 1/17 BIT
1 / 2
12 BIT PROGRAMMABLE DIVIDER
CE 2
DI 3
CL 4
DO 5
SYC 6
SHIFT REGISTER LATCH
UNIVERSAL COUNTER
IN0 7
IN1 8
OUT0 9
OUT1 10
OUT2 11
OUT3 12
24 X OUT
23 VSS
22 PD2
21 PD1
20 VDD
19 FM IN
18 AM IN
17 OUT 6
16 HCTR
15 LCTR
14 OUT 5
13 OUT 4

— MAIN SECTION —

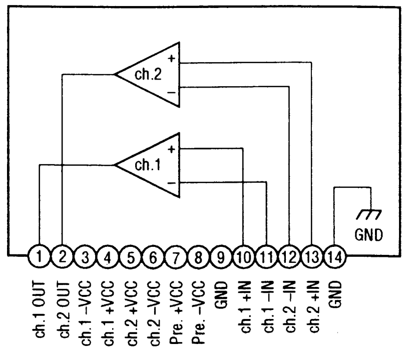
IC201 TA8189N


CH2/A 24
CH2/B 23
NF 22
METAL OUT 21
PRE OUT 20
TAPE A /TAPE B 19
VCC 18
CG 17
REC OUT 16
NF 15
REC IN 14
ALC 13
CH2
CH2
A/B
VREF1
IREF
VREF2
ALC
M/N
CH1
CH1
GND
GND
1 CH1/A
2 CH1/B
3 NF
4 METAL OUT
5 PRE OUT
6 MIX OUT
7 GND1
8 M/H
9 REC OUT
10 NF
11 REC IN
12 GND

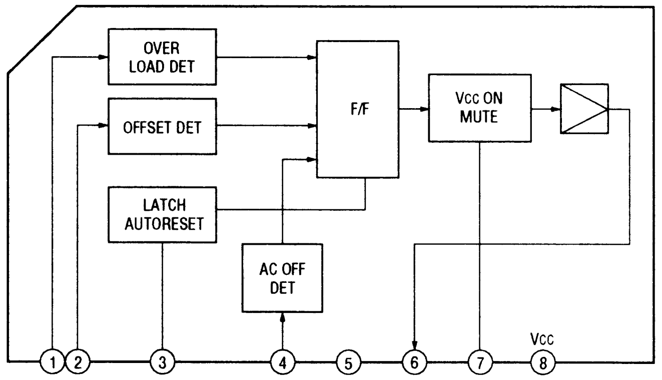
IC303, 401 LC75392


LVROUT 1
LVRIN 2
LTOUT 3
LTCOM 4
LT4 5
LT3 6
LT2 7
LT1 8
L4 9
L3 10
L2 11
L1 12
VDD 13
CL 14
DI 15
30 RVROUT
29 RVRIN
28 RTOUT
27 RTCOM
26 RT4
25 RT3
24 RT2
23 RT1
22 R4
21 R3
20 R2
19 R1
18 VREF
17 VSS
16 CE
LATCH
DECODER
SHIFT REGISTER
CONTROL

IC501 STK405-070A

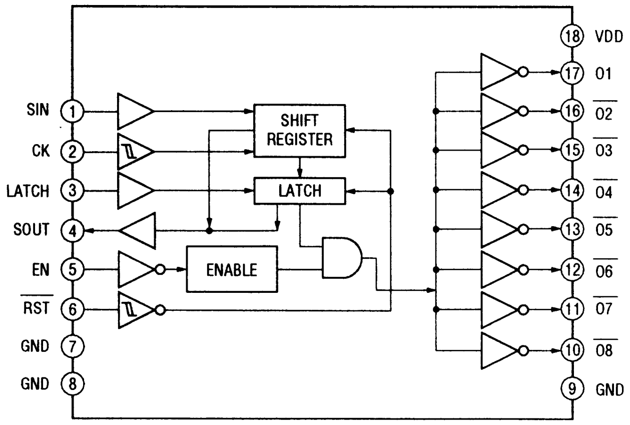

ch.2
ch.1
GND
1 ch.1 OUT
2 ch.2 OUT
3 ch.1 -VCC
4 ch.1 +VCC
5 ch.2 +VCC
6 ch.2 -VCC
7 Pre. +VCC
8 GND
9 Pre. -VCC
10 ch.1 +IN
11 ch.1 -IN
12 ch.2 -IN
13 ch.2 +IN
14 GND

IC502 uPC1237HA


OVER LOAD DET
OFFSET DET
LATCH AUTORESET
AC OFF DET
F/F
Vcc ON MUTE
Vcc
1
2
3
4
5
6
7
8

— PANEL SECTION —

IC603 BU2114


SIN 1
CK 2
LATCH 3
SOUT 4
EN 5
RST 6
GND 7
GND 8
SHIFT REGISTER
LATCH
ENABLE
18 VDD
17 01
16 02
15 03
14 04
13 05
12 06
11 07
10 08
9 GND

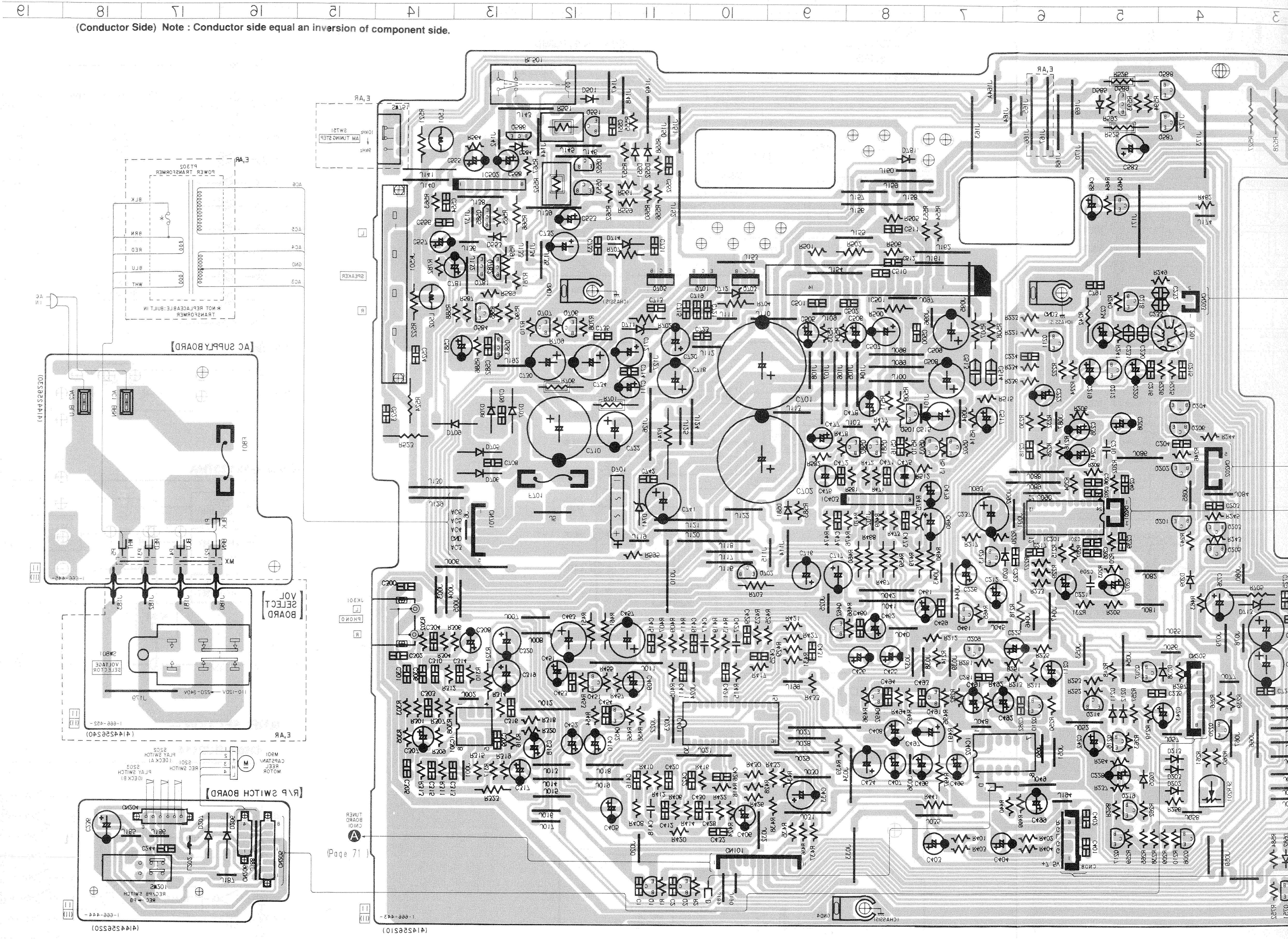
5-4. PRINTED WIRING BOARD — MAIN SECTION — (E, AR, MX, models)

• See page 14 for Circuit Boards Location.

- Semiconductor Location

Ref. No.	Location	Ref. No.	Location
D201	G-6	Q205	G-4
D202	J-4	Q206	F-4
D203	J-4	Q207	I-5
D205	J-5	Q208	K-4
D206	K-16	Q209	H-7
D207	K-17	Q210	I-6
D208	I-4	Q211	E-5
D209	H-4	Q212	E-5
D211	I-5	Q213	G-7
D212	I-5	Q214	I-5
D213	J-4	Q216	J-5
D501	A-12	Q217	K-5
D551	B-11	Q218	D-5
D552	B-11	Q219	J-5
D553	C-13	Q220	I-4
D581	G-9	Q451	I-12
D582	K-3	Q452	I-11
D583	K-3	Q461	H-7
D584	B-13	Q462	H-9
D585	A-5	Q463	C-5
D701	F-11	Q491	I-7
D705	F-13	Q492	I-8
D706	F-13	Q501	F-8
D707	E-13	Q502	F-7
D708	E-13	Q503	F-7
D709	F-13	Q551	B-12
D711	D-11	Q552	B-12
D712	D-10	Q553	C-12
D713	H-3	Q581	F-8
D714	C-11	Q582	F-8
D741	G-11	Q583	E-13
D781	B-8	Q584	D-13
		Q585	C-13
IC201	G-6	Q586	B-13
IC301	I-13	Q587	B-4
IC401	I-11	Q588	A-4
IC402	J-7	Q589	B-5
IC403	G-9	Q701	D-10
IC501	D-8	Q702	G-9
IC502	B-13	Q703	D-10
		Q704	H-3
Q1	L-11	Q705	D-11
Q2	L-10	Q706	D-12
Q201	G-4	Q707	D-12
Q202	F-4	Q751	L-3
Q203	G-4	Q781	D-13
Q204	E-4	Q782	D-13

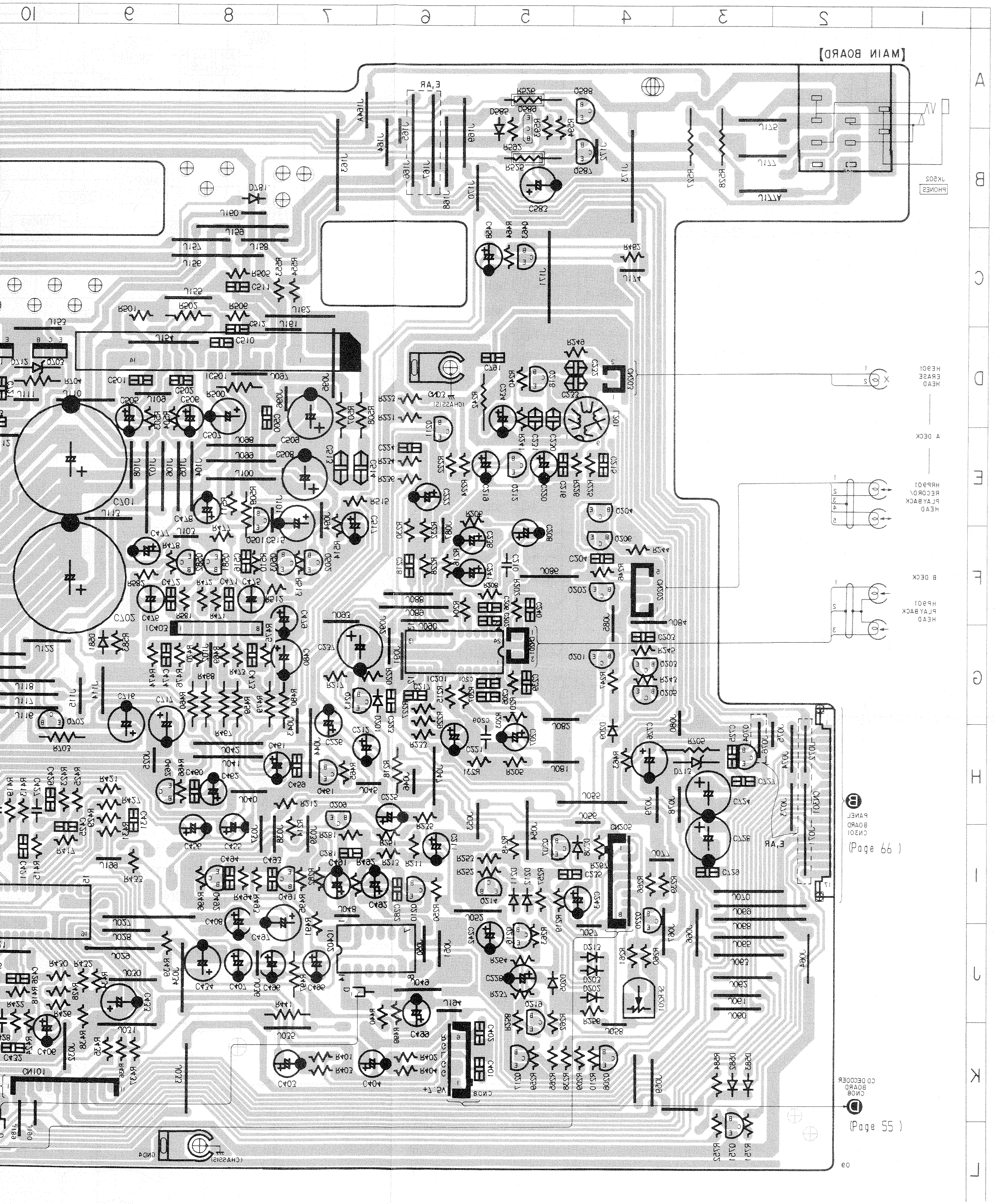
(Conductor Side) Note : Conductor side equal an inversion of component side.



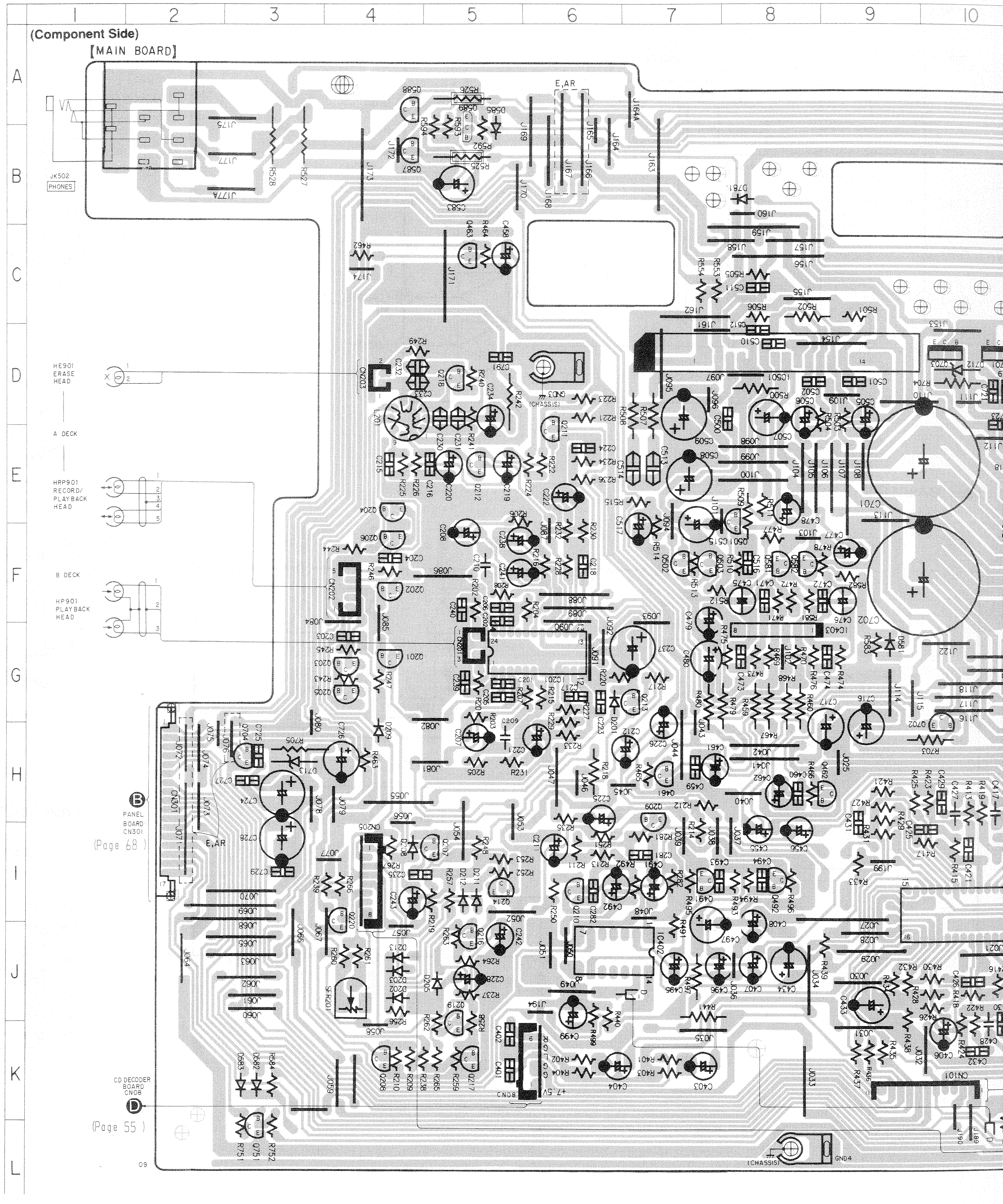
Note:

- o—— : parts extracted from the component side.
- Abbreviation

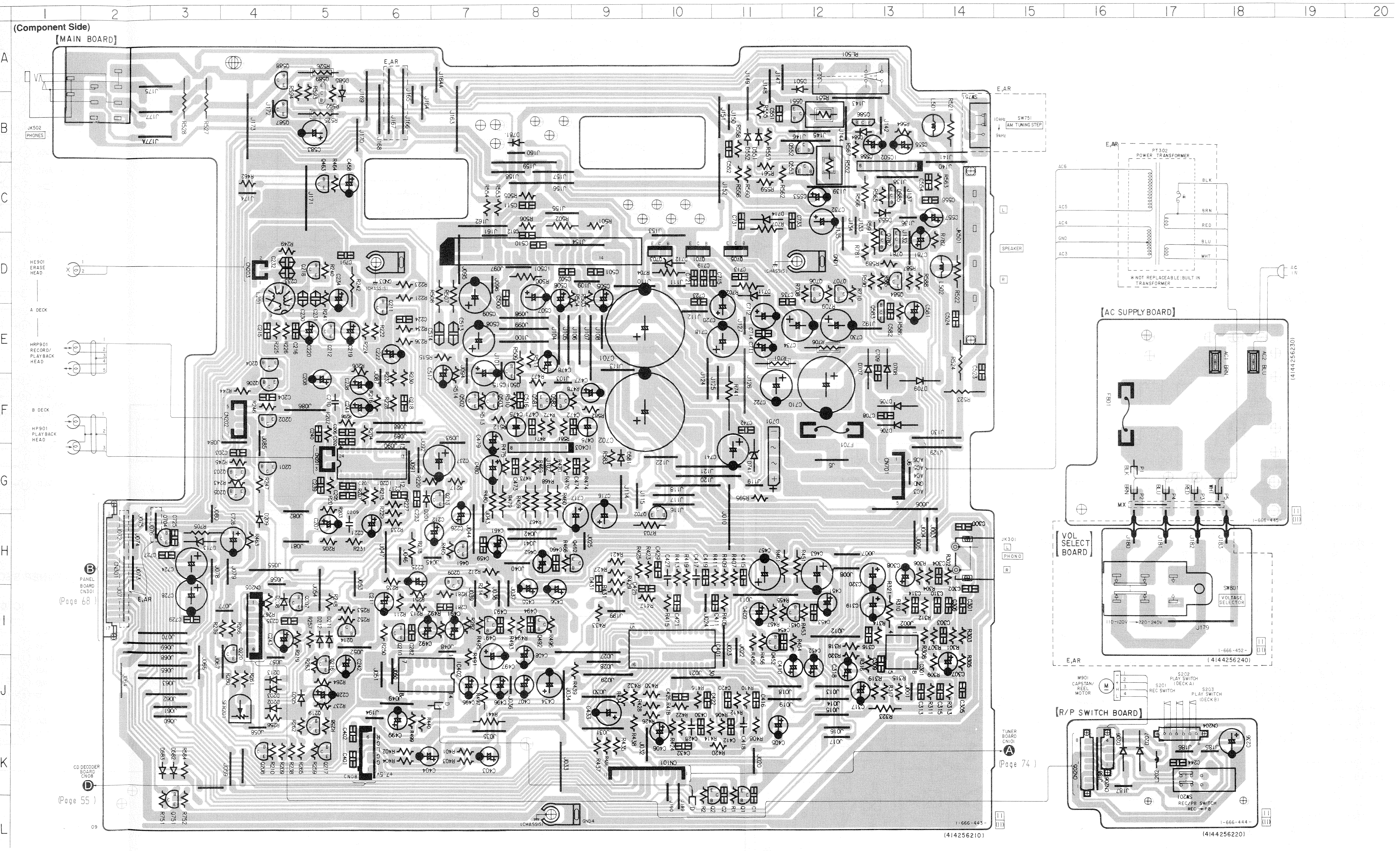
AR : Argentine model.
MX : Mexican model.


[MAIN BOARD]
JK502 PHONES
HE901 ERASE HEAD
A DECK
HRP901 RECORD/PLAYBACK HEAD
B DECK
HP901 PLAYBACK HEAD
E,AR
PANEL BOARD CN301
(Page 66)
CD DECODER BOARD CN08
(Page 55)
(CHASSIS)
GND4
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
J
K
L

(Component Side)

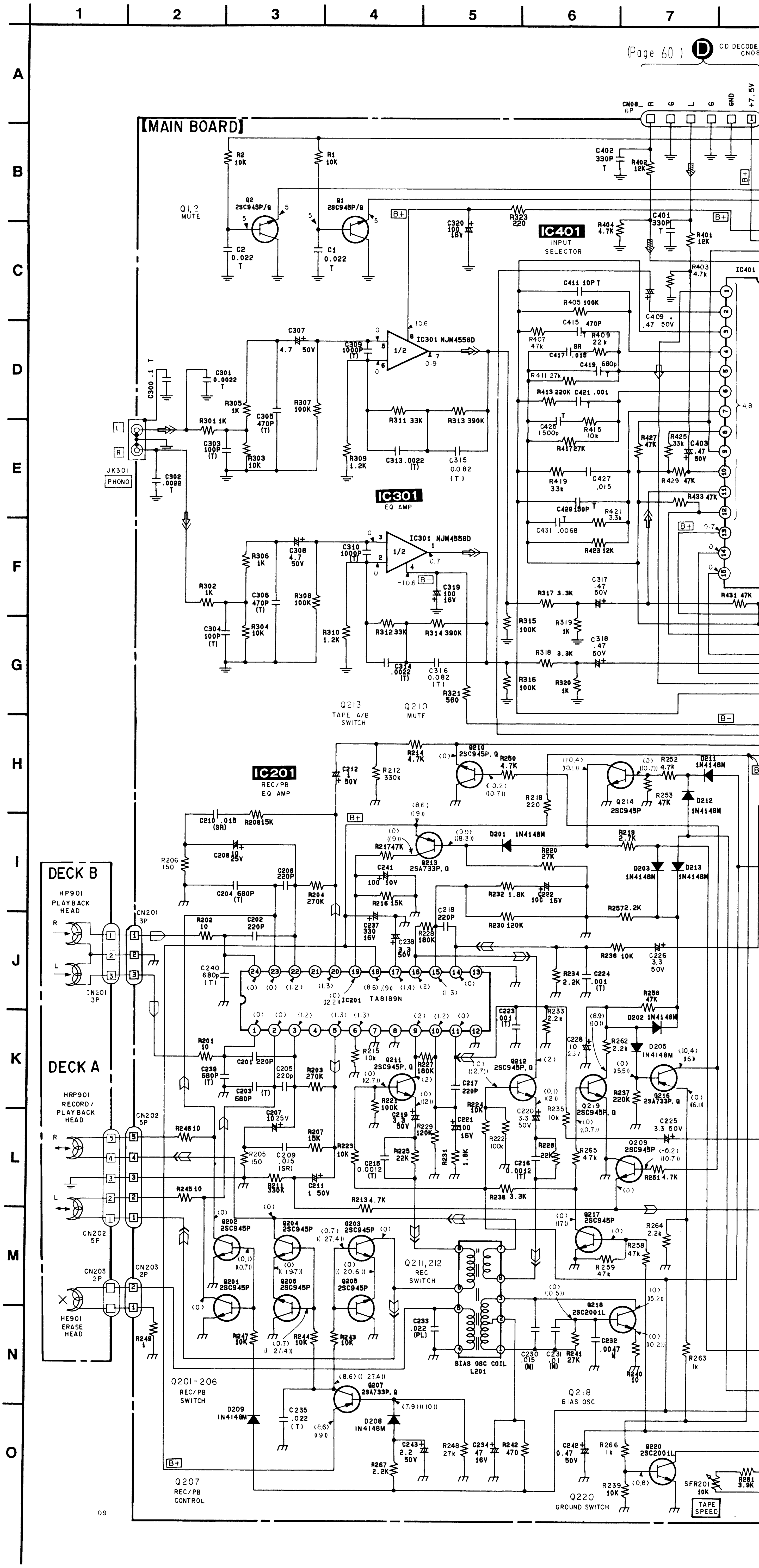

[MAIN BOARD]
JK502 PHONES
HE901 ERASE HEAD
A DECK
HRP901 RECORD/ PLAYBACK HEAD
B DECK
HP901 PLAYBACK HEAD
E,AR
PANEL BOARD CN301
(Page 68)
CD DECODER BOARD CN08
(Page 55)
(CHASSIS)
GND4
+7.5V
1
2
3
4
5
6
7
8
9
10
A
B
C
D
E
F
G
H
I
J
K
L

(Component Side)


[MAIN BOARD]
JK502 PHONES
HE901 ERASE HEAD
A DECK
HRP901 RECORD/PLAYBACK HEAD
B DECK
HP901 PLAYBACK HEAD
B PANEL BOARD CN301 (Page 68)
CD DECODER BOARD CN08
D (Page 55)
E,AR
SW751 AM TUNING STEP
10kHz
9kHz
SPEAKER
L
R
JK301 PHONO
TUNER BOARD CN101
A (Page 74)
1-666-443-
(4)4256210)
PT302 POWER TRANSFORMER
AC6
AC5
AC4
GND
AC3
BLK
BRN
RED
BLU
WHT
*NOT REPLACEABLE:BUILT IN TRANSFORMER
AC IN
[AC SUPPLY BOARD]
AC1 BRN
AC2 BLU
F801
(4)4256230)
1-666-445-
[VOL SELECT BOARD]
S801 VOLTAGE SELECTOR
110-120V
220-240V
1-666-452-
(4)4256240)
M901 CAPSTAN/REEL MOTOR
S201 REC SWITCH
S202 PLAY SWITCH (DECK A)
S203 PLAY SWITCH (DECK B)
[R/P SWITCH BOARD]
S201 REC/PB SWITCH REC ← PB
1-666-444-
(4)4256220)
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
A B C D E F G H I J K L

5-5. SCHEMATIC DIAGRAM — MAIN SECTION — (E, AR, MX, models)

- See page 32 for IC Block Diagrams.

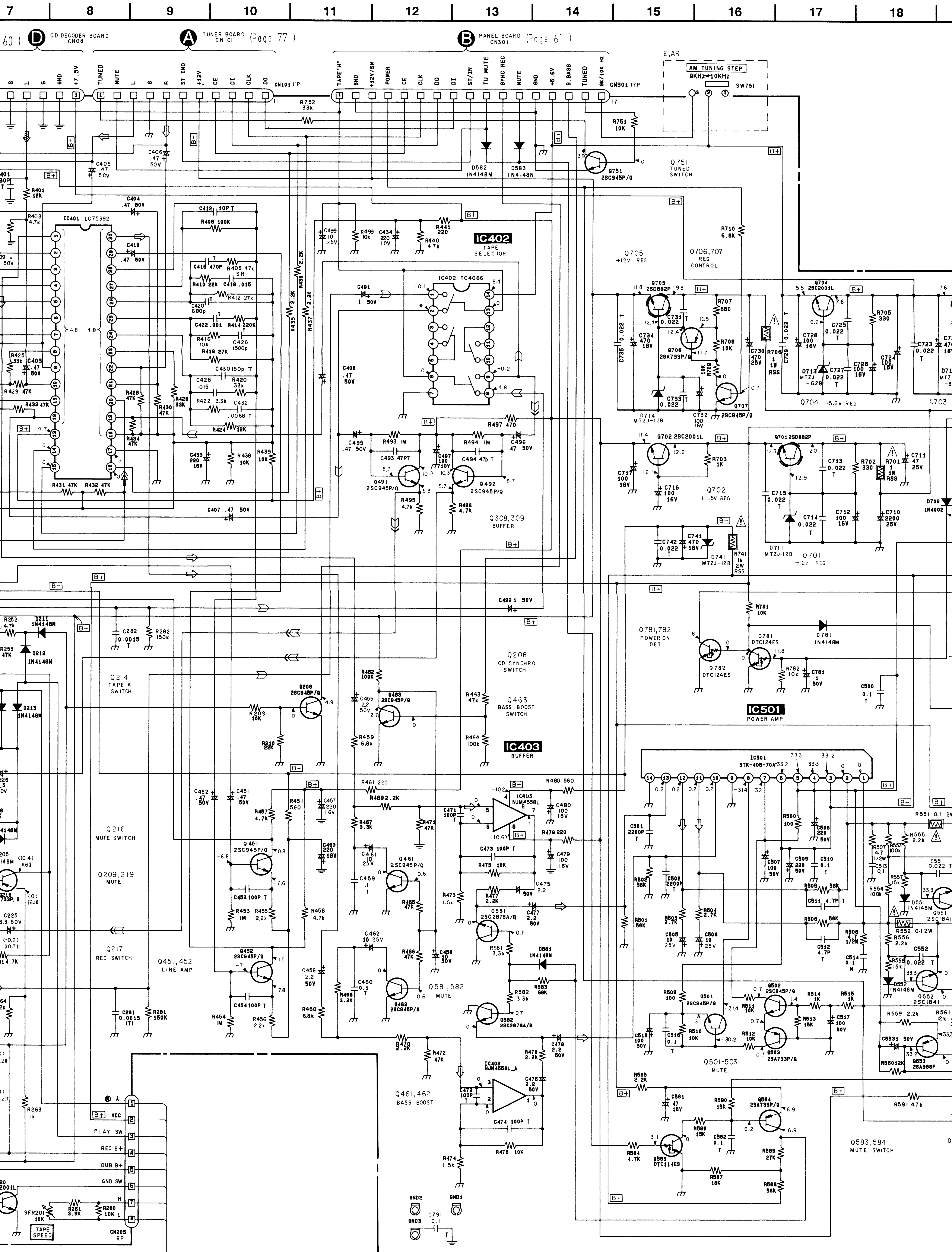

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
(Page 60)
D
CD DECODE
CN08
6P
R
G
L
G
GND
+7.5V
MAIN BOARD
R2 10K
R1 10K
Q1,2 MUTE
Q2 2SC945P/Q
Q1 2SC945P/Q
C2 0.022 T
C1 0.022 T
B+
C320 100 16V
R323 220
IC401
INPUT SELECTOR
C402 330P T
R402 12K
R404 4.7K
C401 330P T
R401 12K
R403 4.7k
IC401
C411 10P T
R405 100K
C415 470P
R407 47k
R409 22k
C417 .015
C419 680p
R411 27k
R413 220K
C421 .001
C425 1500p
R415 10k
R417 27K
R419 33k
C427 .015
C429 150P T
R421 3.3k
C431 .0068
R423 12K
C409 .47 50V
R427 47K
R425 33k
C403 .47 50V
R429 47K
R433 47K
R431 47K
C307 4.7 50V
C309 1000P
IC301 NJM4558D
1/2
R311 33K
R313 390K
R309 1.2K
C313 .0022
C315 0.082
C300 .1 T
C301 0.0022 T
R305 1K
C305 470P
R307 100K
R301 1K
C303 100P
R303 10K
C302 .0022 T
JK301 PHONO
IC301
EQ AMP
C308 4.7 50V
R306 1K
C310 1000P
R302 1K
C306 470P
R308 100K
C304 100P
R304 10K
R310 1.2K
R312 33K
R314 390K
C319 100 16V
C314 .0022
C316 0.082
R321 560
R317 3.3K
C317 .47 50V
R315 100K
R319 1K
C318 .47 50V
R318 3.3K
R316 100K
R320 1K
Q213 TAPE A/B SWITCH
Q210 MUTE
B-
R214 4.7K
Q210 2SC945P, Q
R250 4.7K
C212 1 50V
R212 330k
R218 220
IC201
REC/PB EQ AMP
R252 4.7k
D211 1N4148M
Q214 2SC945P
R253 47K
D212 1N4148M
C210 .015 (SR)
R208 15K
R217 47K
Q213 2SA733P, Q
D201 1N4148M
R220 27K
R219 2.7K
D203 1N4148M
D213 1N4148M
R206 150
C208 10 25V
C241 100 10V
C206 220P
C204 680P
R204 270K
R216 15K
R232 1.8K
C222 100 16V
R257 2.2K
DECK B
HP901 PLAYBACK HEAD
CN201 3P
R202 10
C202 220P
C237 330 16V
C238 3.3 50V
R228 180K
C218 220P
R230 120K
R236 10K
C226 3.3 50V
C240 680p
IC201 TA8189N
R234 2.2K
C224 .001
R256 47K
D202 1N4148M
C223 .001
R233 2.2k
R201 10
R215 10k
Q211 2SC945P, Q
R227 180K
Q212 2SC945P, Q
C228 10
R262 2.2k
D205 1N4148M
DECK A
HRP901 RECORD/PLAYBACK HEAD
C239 680P
C201 220P
C205 220p
R203 270K
C203 680P
R221 100K
C219 3.3 50V
C217 220P
R224 10K
C220 3.3 50V
R235 10k
Q219 2SC945P, Q
R237 220K
Q216 2SA733P, Q
C225 3.3 50V
CN202 5P
C207 10 25V
R207 15K
R229 120K
C221 100 16V
R222 100k
R246 10
R205 150
C209 .015 (SR)
R223 10K
R225 22K
R231 1.8K
C215 0.0012
C216 0.0012
R226 22K
R265 4.7k
Q209 2SC945P
R251 4.7K
R245 10
R211 330K
C211 1 50V
R213 4.7K
R238 3.3K
Q217 2SC945P
R264 2.2k
R258 47k
R259 47k
Q202 2SC945P
Q204 2SC945P
Q203 2SC945P
Q211, 212 REC SWITCH
CN203 2P
Q201 2SC945P
Q206 2SC945P
Q205 2SC945P
HE901 ERASE HEAD
R248 1
R247 10K
R244 10K
R243 10K
C233 .022 (PL)
BIAS OSC COIL L201
C230 .015 (M)
C231 .01 (M)
R241 27K
Q218 2SC2001L
C232 .0047 N
R240 10
R263 1k
Q201-206 REC/PB SWITCH
Q207 2SA733P, Q
Q218 BIAS OSC
D209 1N4148M
C235 .022 (T)
D208 1N4148M
C243 2.2 50V
R267 2.2K
R248 27k
C234 47 16V
R242 470
C242 0.47 50V
R266 1k
Q220 2SC2001L
Q207 REC/PB CONTROL
R239 10K
Q220 GROUND SWITCH
SFR201 10K
R281 3.9K
TAPE SPEED
09

Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- ▭ : nonflammable resistor.
- ▭ : panel designation.

> **Note:**
> The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
> Replace only with part number specified.

- **B+** : B+ Line
- **B-** : B- Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  < > : PB
  (( )) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⇨ : PB (DECK A)
  ⇨ : PB (DECK B)
  ⇨ : REC (DECK A)
  ⇨ : CD
  ⇨ : PHONO
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.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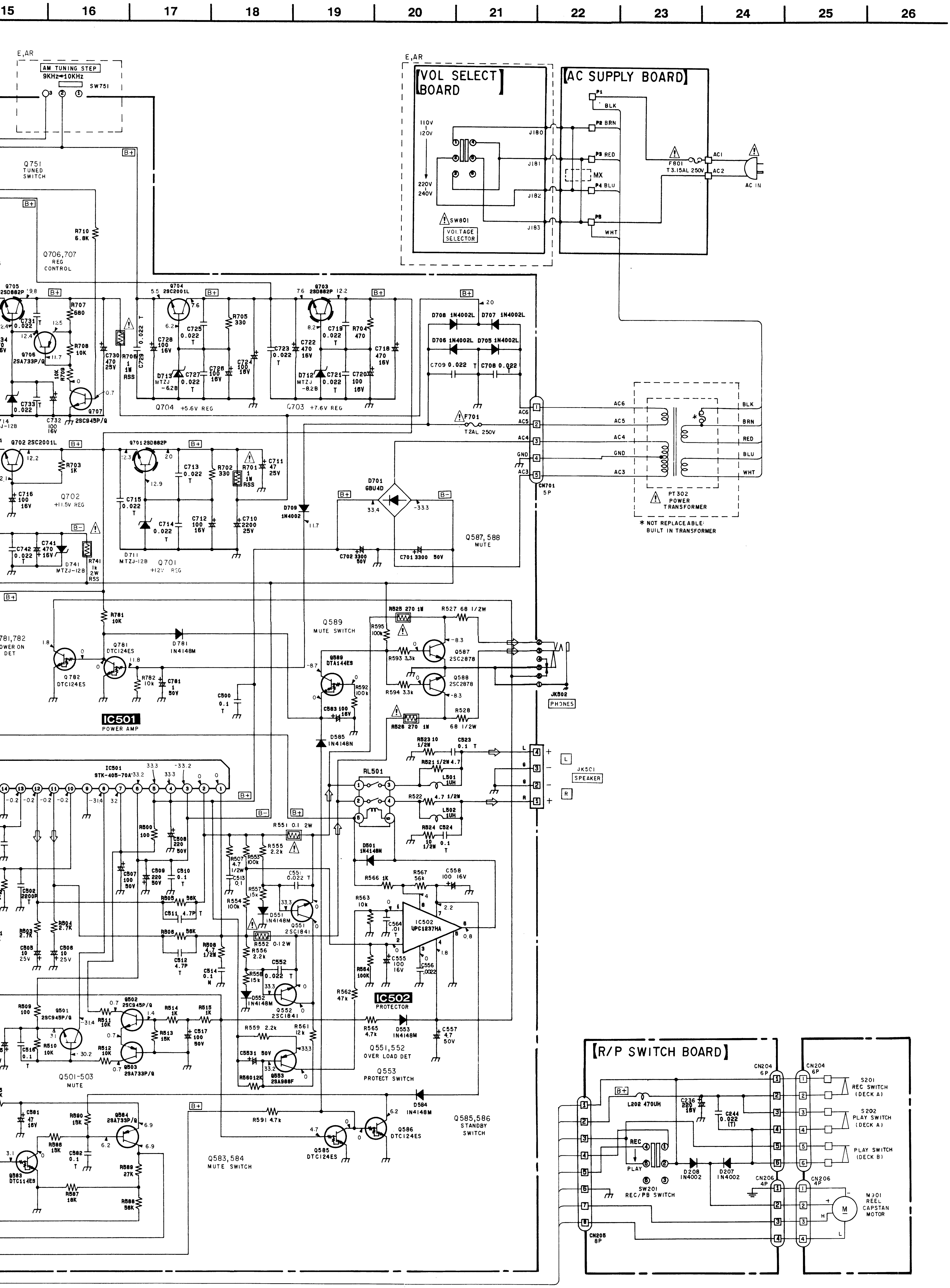
60)
D CD DECODER BOARD CN08
A TUNER BOARD CN101 (Page 77)
B PANEL BOARD CN301 (Page 61)
CN101 11P
CN301 17P
TUNED
MUTE
ST IND
+12V
CE
DI
CLK
DO
TAPE"H"
GND
+12V/SW
POWER
ST/IN
TU MUTE
SYNC REC
+5.6V
S.BASS
9K/10K Hz
+7.5V
E,AR
AM TUNING STEP
9KHz⇌10KHz
SW751
R752 33k
R751 10K
D582 1N4148M
D583 1N4148N
Q751 2SC945P/Q
Q751 TUNED SWITCH
IC401 LC75392
IC402
TAPE SELECTOR
IC402 TC4066
R710 6.8K
Q705 +12V REG
Q706,707 REG CONTROL
Q705 2SD882P
Q704 2SC2001L
Q706 2SA733P/Q
Q707 2SC945P/Q
D714 MTZJ-12B
D713 MTZJ-6.2B
Q704 +5.6V REG
Q703
Q702 2SC2001L
Q702 +11.5V REG
Q701 2SD882P
Q701 +12V REG
D711 MTZJ-12B
D741 MTZJ-12B
D709 1N4002
Q491 2SC945P/Q
Q492 2SC945P/Q
Q308,309 BUFFER
Q208 CD SYNCHRO SWITCH
Q208 2SC945P/Q
Q214 TAPE A SWITCH
Q463 BASS BOOST SWITCH
Q463 2SC945P/Q
IC403 BUFFER
IC403 NJM4558L
Q781,782 POWER ON DET
Q781 DTC124ES
Q782 DTC124ES
D781 1N4148M
IC501 POWER AMP
IC501 STK-405-70A
Q216 MUTE SWITCH
Q209,219 MUTE
Q217 REC SWITCH
Q451,452 LINE AMP
Q451 2SC945P/Q
Q452 2SC945P/Q
Q461 2SC945P/Q
Q462 2SC945P/Q
Q581,582 MUTE
Q581 2SC2878A/B
Q582 2SC2878A/B
D581 1N4148M
Q461,462 BASS BOOST
IC403 NJM4558L_A
Q501-503 MUTE
Q501 2SC945P/Q
Q502 2SC945P/Q
Q503 2SA733P/Q
Q583,584 MUTE SWITCH
Q583 DTC114ES
Q584 2SA733P/Q
D551 1N4148M
D552 1N4148M
Q551 2SC1841
Q552 2SC1841
Q553 2SA988F
D211 1N4148M
D212 1N4148M
D213 1N4148M
Q216 2SA733P,Q
Q220 2SC2001L
SFR201 10K
TAPE SPEED
CN205 8P
VCC
PLAY SW
REC B+
DUB B+
GND SW
GND1
GND2
GND3
C791 0.1
B+
B-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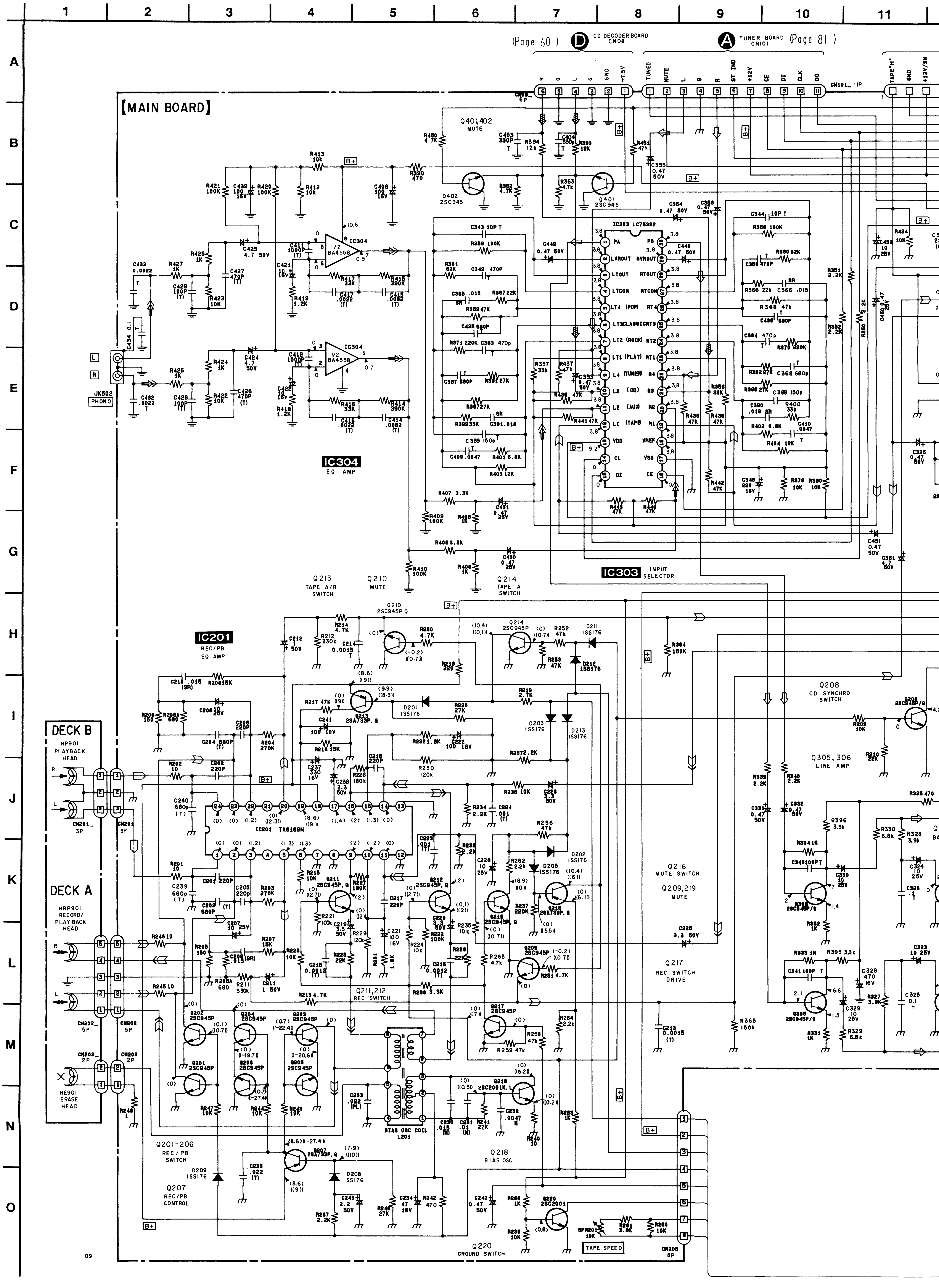
E,AR
AM TUNING STEP
9KHz⇌10KHz
SW751
Q751
TUNED SWITCH
VOL SELECT BOARD
110V 120V
220V 240V
SW801
VOLTAGE SELECTOR
J180
J181
J182
J183
AC SUPPLY BOARD
P1 BLK
P2 BRN
P3 RED
P4 BLU
P5 WHT
MX
F801 T3.15AL 250V
AC1
AC2
AC IN
R710 6.8K
Q706,707 REG CONTROL
Q705 2SD882P
Q706 2SA733P/Q
Q707 2SC945P/Q
R707 680
R708 10K
R709 10K
C731 0.022
C733 0.022
C732 100 16V
Q704 2SC2001L
R705 330
C725 0.022
C726 100 16V
C727 0.022
C728 100 16V
C724 100 16V
D713 MTZJ-6.2B
C730 470 25V
R706 1 1W RSS
C729 0.022
Q704 +5.6V REG
Q703 2SD882P
R704 470
C719 0.022
C722 470 16V
C723 0.022
C718 470 16V
C720 100 16V
C721 0.022
D712 MTZJ-8.2B
Q703 +7.6V REG
D708 1N4002L
D707 1N4002L
D706 1N4002L
D705 1N4002L
C709 0.022
C708 0.022
F701 T2AL 250V
AC6
AC5
AC4
GND
AC3
CN701 5P
BLK
BRN
RED
BLU
WHT
PT302 POWER TRANSFORMER
* NOT REPLACEABLE: BUILT IN TRANSFORMER
Q702 2SC2001L
R703 1K
C716 100 16V
Q702 +11.5V REG
Q701 2SD882P
C713 0.022
R702 330
R701 1 1W RSS
C711 47 25V
C715 0.022
C714 0.022
C712 100 16V
C710 2200 25V
D711 MTZJ-12B
Q701 +12V REG
D709 1N4002
D701 GBU4D
C702 3300 50V
C701 3300 50V
Q587,588 MUTE
C742 0.022
C741 470 16V
D741 MTZJ-12B
R741 1k 2W RSS
R781 10K
Q781,782 POWER ON DET
Q781 DTC124ES
Q782 DTC124ES
D781 1N4148M
R782 10k
C781 1 50V
C500 0.1
IC501 POWER AMP
IC501 STK-405-070A
Q589 MUTE SWITCH
Q589 DTA144ES
R595 100k
R592 100k
C583 100 16V
D585 1N4148N
R525 270 1W
R527 68 1/2W
R593 3.3k
R594 3.3k
Q587 2SC2878
Q588 2SC2878
R526 270 1W
R528 68 1/2W
JK502 PHONES
R523 10 1/2W
C523 0.1
R521 1/2W 4.7
L501 1UH
R522 4.7 1/2W
L502 1UH
R524 10 1/2W
C524 0.1
RL501
JK501 SPEAKER
L
R
R500 100
C508 220 50V
C507 100 50V
C509 220 50V
C510 0.1
C502 2200P
R505 56K
C511 4.7P
R506 56K
C512 4.7P
R503 2.7K
R504 2.7K
C505 10 25V
C506 10 25V
R508 4.7 1/2W
C514 0.1
R551 0.1 2W
R555 2.2k
R507 4.7 1/2W
C513 0.1
R553 100k
R554 100k
R557 15k
D551 1N4148M
Q551 2SC1841
C551 0.022
R552 0.12W
R556 2.2k
R558 15k
C552 0.022
D552 1N4148M
Q552 2SC1841
R559 2.2k
R561 12k
C553 1 50V
R560 12K
Q553 2SA988F
Q551,552 OVER LOAD DET
Q553 PROTECT SWITCH
D501 1N4148M
R566 1K
R567 56k
C558 100 16V
R563 10k
C564 .01
IC502 UPC1237HA
IC502 PROTECTOR
C555 100 16V
C556 .0022
R564 100K
R562 47k
R565 4.7k
D553 1N4148M
C557 4.7 50V
R509 100
Q501 2SC945P/Q
Q502 2SC945P/Q
Q503 2SA733P/Q
R511 10K
R512 10K
R513 15K
R514 1K
R515 1K
C517 100 50V
C516 0.1
R510 10K
Q501-503 MUTE
C581 47 16V
R590 15K
Q584 2SA733P/Q
R586 15K
C582 0.1
R589 27K
R587 18K
R588 56K
Q583 DTC114ES
Q583,584 MUTE SWITCH
R591 4.7k
D584 1N4148M
Q585 DTC124ES
Q586 DTC124ES
Q585,586 STANDBY SWITCH
R/P SWITCH BOARD
CN204 6P
L202 470UH
C236 220 16V
C244 0.022
REC
PLAY
SW201 REC/PB SWITCH
D208 1N4002
D207 1N4002
CN205 8P
CN206 4P
S201 REC SWITCH (DECK A)
S202 PLAY SWITCH (DECK A)
PLAY SWITCH (DECK B)
M301 REEL CAPSTAN MOTOR
B+
B−

5-6. SCHEMATIC DIAGRAM — MAIN SECTION — (AEP, UK models)

- See page 32 for IC Block Diagrams.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M
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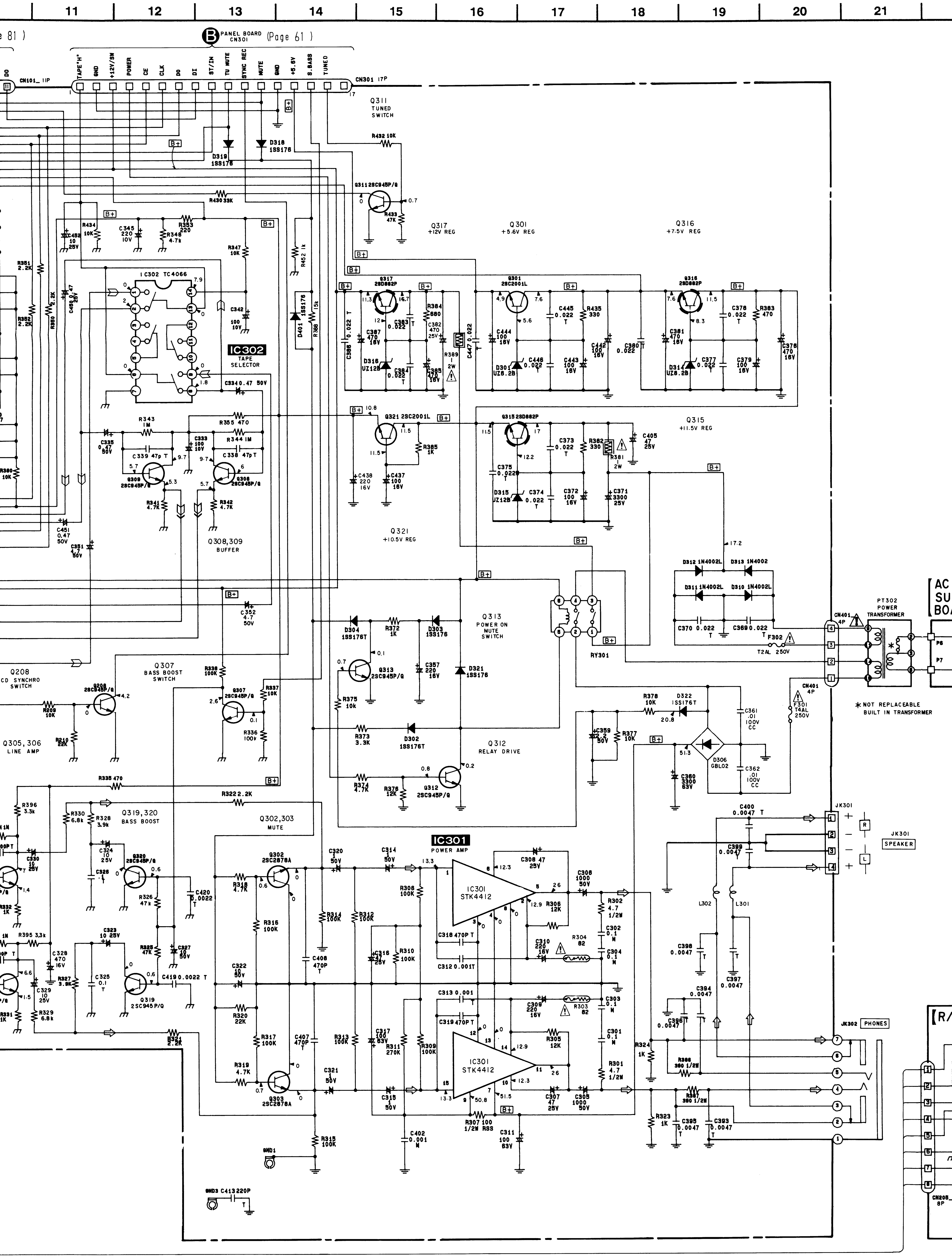
O
(Page 60)
D
CD DECODER BOARD CN08
A
TUNER BOARD CN101
(Page 81)
[MAIN BOARD]
Q401,402 MUTE
Q402 2SC945
Q401 2SC945
IC304 1/2 BA4558
IC304 EQ AMP
JK502 PHONO
L
R
IC303 LC75392
IC303 INPUT SELECTOR
Q213 TAPE A/B SWITCH
Q210 MUTE
Q214 TAPE A SWITCH
IC201 REC/PB EQ AMP
IC201 TA8189N
Q208 CD SYNCHRO SWITCH
Q305,306 LINE AMP
Q216 MUTE SWITCH
Q209,219 MUTE
Q217 REC SWITCH DRIVE
Q211,212 REC SWITCH
DECK B
HP901 PLAYBACK HEAD
DECK A
HRP901 RECORD/PLAY BACK HEAD
HE901 ERASE HEAD
CN201 3P
CN202 5P
CN203 2P
BIAS OSC COIL L201
Q201-206 REC/PB SWITCH
Q207 REC/PB CONTROL
Q218 BIAS OSC
Q220 GROUND SWITCH
SFR201 10K
TAPE SPEED
CN205 8P
CN101 11P
TUNED
MUTE
ST IND
+12V
CE
DI
CLK
DO
TAPE"H"
GND
+12V/SW
+7.5V
B+
09

11
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e 81)
B PANEL BOARD CN301 (Page 61)
TAPE"H"
GND
+12V/SW
POWER
CE
CLK
DO
DI
ST/IN
TU MUTE
SYNC REC
MUTE
GND
+5.6V
S.BASS
TUNED
CN101_ 11P
CN301 17P
Q311 TUNED SWITCH
R432 10K
Q311 2SC945P/Q
D319 1SS176
D318 1SS176
R430 33K
Q317 +12V REG
Q301 +5.6V REG
Q316 +7.5V REG
Q317 2SD882P
Q301 2SC2001L
Q316 2SD882P
IC302 TC4066
IC302 TAPE SELECTOR
R343 1M
R355 470
R344 1M
C339 47p T
C338 47p T
Q309 2SC945P/Q
Q308 2SC945P/Q
Q308,309 BUFFER
Q321 2SC2001L
Q315 2SD882P
Q315 +11.5V REG
Q321 +10.5V REG
R381 2W
R389 2W
D401 1SS176
R452 1k
R388 15k
D316 UZ12B
D301 UZ6.2B
D314 UZ8.2B
D315 UZ12B
C371 3300 25V
D312 1N4002L
D313 1N4002
D311 1N4002L
D310 1N4002L
C370 0.022
C369 0.022
F302 T2AL 250V
AC SU BO
PT302 POWER TRANSFORMER
CN401 4P
F301 T4AL 250V
RY301
Q313 POWER ON MUTE SWITCH
D304 1SS176T
D303 1SS176
D321 1SS176
Q313 2SC945P/Q
R373 3.3K
D302 1SS176T
Q312 RELAY DRIVE
Q312 2SC945P/Q
R378 10K
D322 1SS176T
D306 GBL02
C360 3300 63V
✱ NOT REPLACEABLE BUILT IN TRANSFORMER
Q208 CD SYNCHRO SWITCH
Q208 2SC945P/Q
Q307 BASS BOOST SWITCH
Q307 2SC945P/Q
Q305, 306 LINE AMP
R335 470
R322 2.2K
Q319,320 BASS BOOST
Q320 2SC945P/Q
Q319 2SC945P/Q
Q302,303 MUTE
Q302 2SC2878A
Q303 2SC2878A
IC301 POWER AMP
IC301 STK4412
C306 47 25V
C308 1000 50V
R302 4.7 1/2W
R301 4.7 1/2W
R307 100 1/2W RSS
C311 100 63V
C305 1000 50V
C307 47 25V
JK301 SPEAKER
C400 0.0047 T
C399 0.0047
L302
L301
JK302 PHONES
R386 390 1/2W
R387 390 1/2W
C395 0.0047 T
C393 0.0047 T
GND1
GND3 C413 220P
[R/
CN205_ 8P
R
L
+
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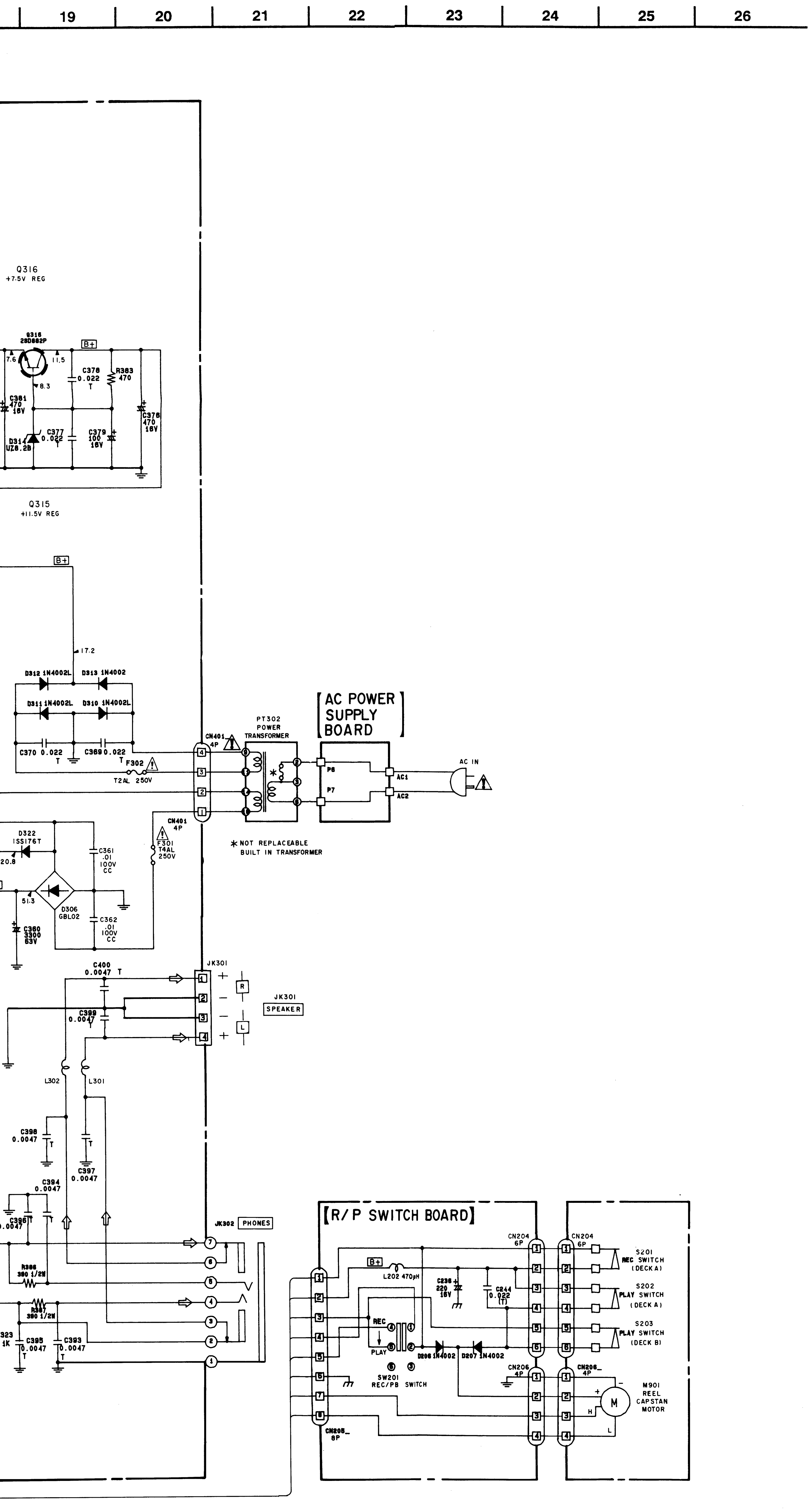
19
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24
25
26
Q316
+7.5V REG
Q316
2SD882P
B+
7.6
11.5
8.3
C378
0.022
T
R383
470
C381
470
16V
C376
470
16V
D314
UZ6.2B
C377
0.022
T
C379
100
16V
Q315
+11.5V REG
B+
17.2
D312 1N4002L
D313 1N4002
D311 1N4002L
D310 1N4002L
C370 0.022
T
C369 0.022
T
F302
T2AL 250V
CN401
4P
PT302
POWER
TRANSFORMER
AC POWER
SUPPLY
BOARD
P6
P7
AC1
AC2
AC IN
CN401
4P
F301
T4AL
250V
D322
1SS176T
20.8
51.3
C361
.01
100V
CC
D306
GBL02
C362
.01
100V
CC
C360
3300
63V
*NOT REPLACEABLE
BUILT IN TRANSFORMER
C400
0.0047 T
JK301
R
L
JK301
SPEAKER
C399
0.0047
T
L302
L301
C398
0.0047
T
C397
0.0047
C394
0.0047
C396
0.0047
JK302
PHONES
R366
390 1/2W
R367
390 1/2W
323
1K
C395
0.0047
T
C393
0.0047
T
[R/P SWITCH BOARD]
B+
L202 470μH
C236
220
16V
C244
0.022
(T)
REC
PLAY
SW201
REC/PB SWITCH
D206 1N4002
D207 1N4002
CN205
8P
CN204
6P
CN204
6P
CN206
4P
CN206
4P
S201
REC SWITCH
(DECK A)
S202
PLAY SWITCH
(DECK A)
S203
PLAY SWITCH
(DECK B)
M
M901
REEL
CAPSTAN
MOTOR
H
L

Note:

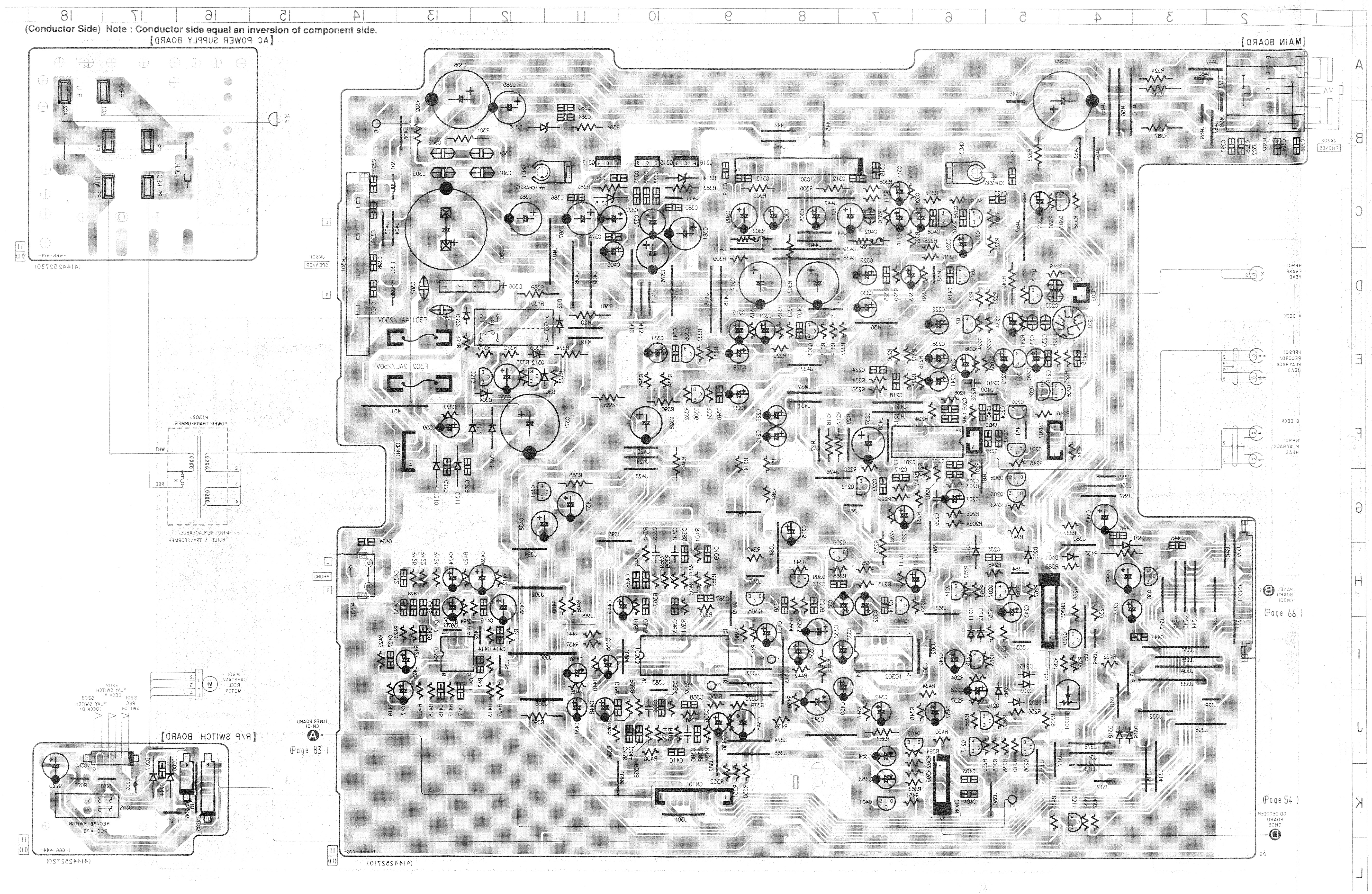
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- ▭ : nonflammable resistor.
- ☐ : panel designation.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- B- : B- Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  < > : PB
  (( )) : REC
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : FM
  ⊳ : PB (DECK A)
  ▷ : PB (DECK B)
  ⊳⟩ : REC (DECK A)
  ⇨ : CD
  ⇨⟩ : PHONO

5-7. PRINTED WIRING BOARD — MAIN SECTION — (AEP, UK models)

- See page 14 for Circuit Boards Location.



(Conductor Side) Note : Conductor side equal an inversion of component side.

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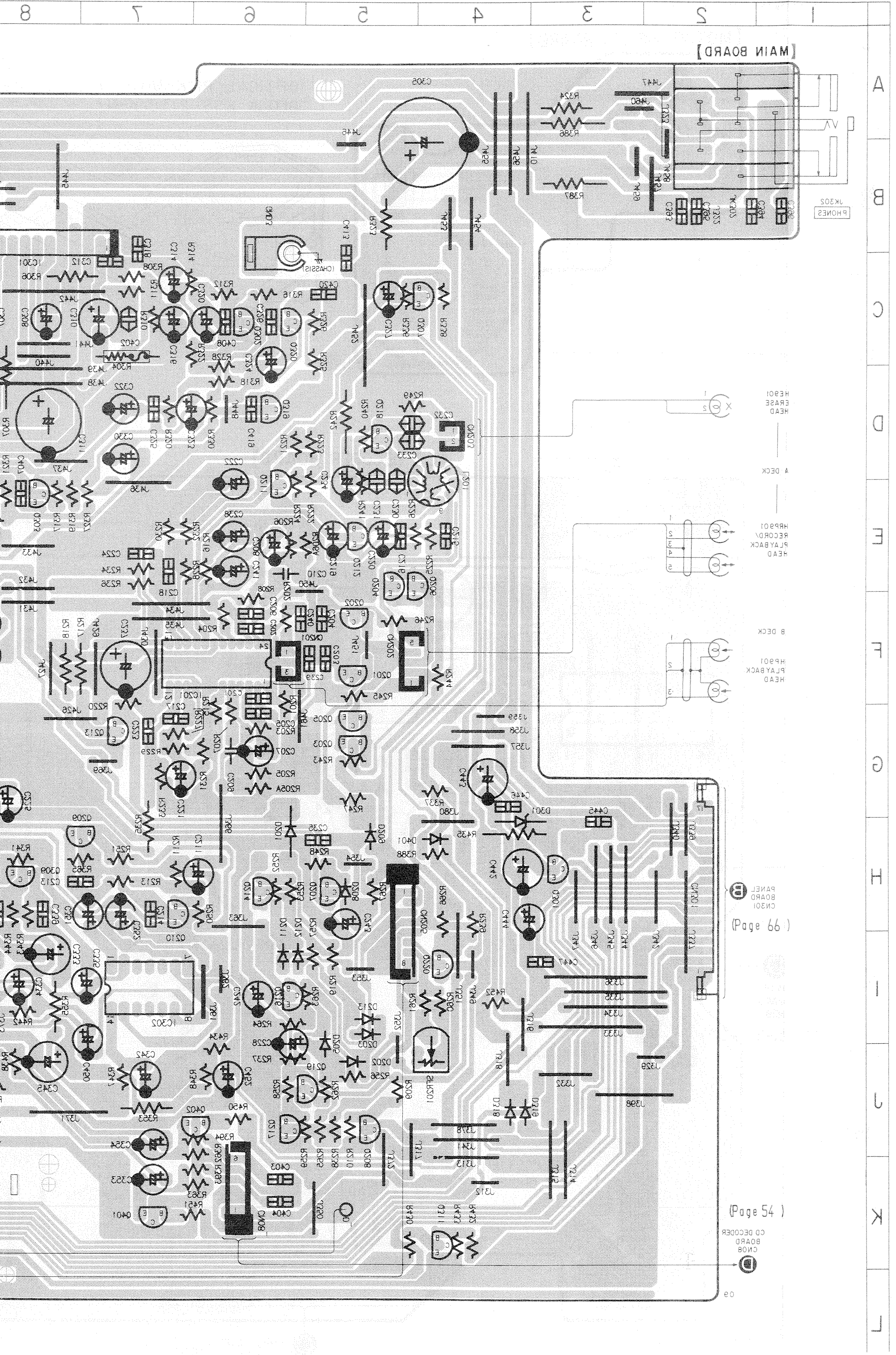
A
B
C
D
E
F
G
H
I
J
K
L
[AC POWER SUPPLY BOARD]
[MAIN BOARD]
[R/P SWITCH BOARD]
AC IN
PHONO
TUNER BOARD CN101
(Page 83)
PANEL BOARD CN301
(Page 66)
CD DECODER BOARD CN801
(Page 54)
M
F301 4AL/250V
F302 2AL/250V


[MAIN BOARD]
A
B
C
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K
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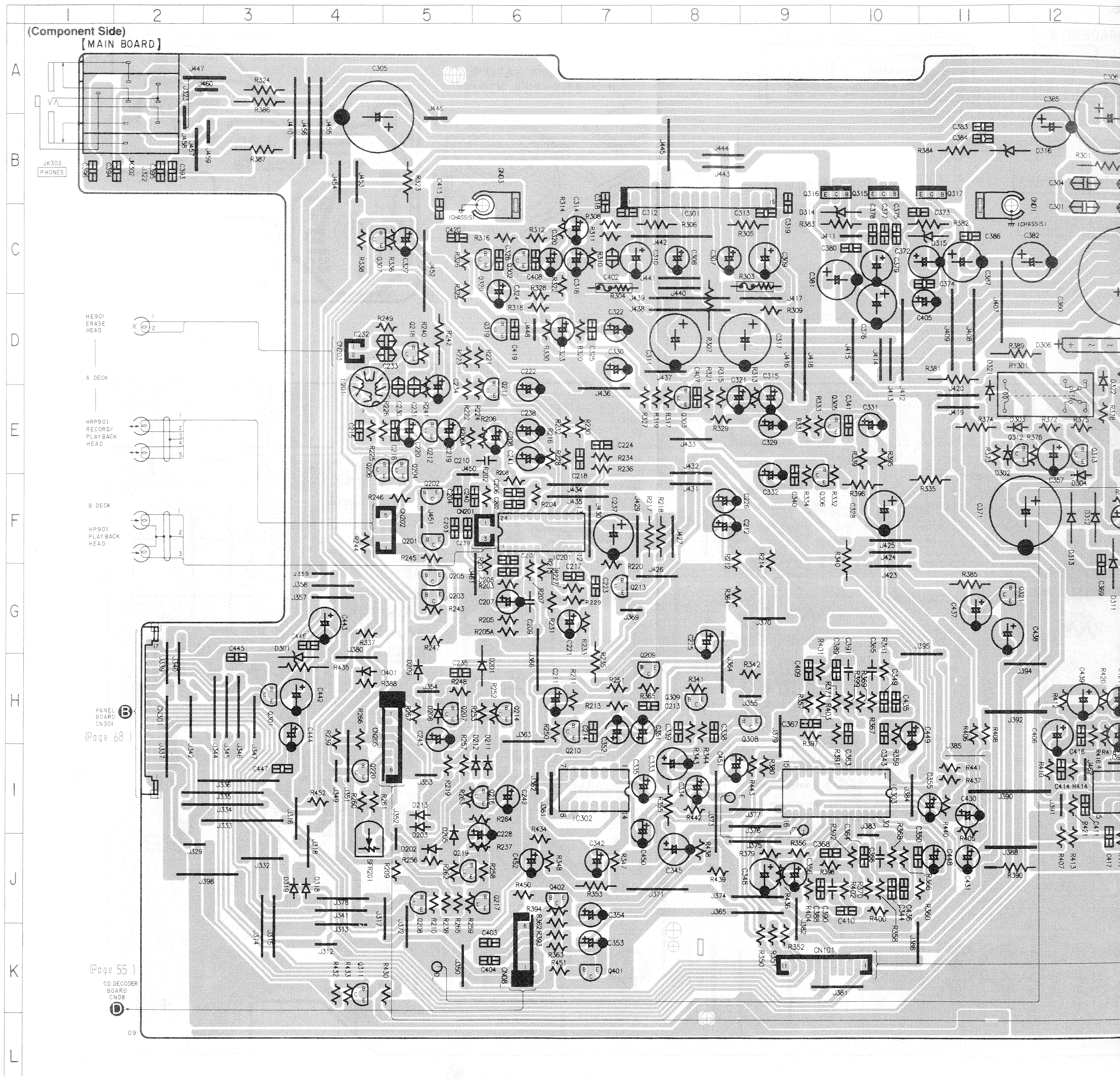
2
1
(Page 66)
(Page 54)


(Component Side)
[MAIN BOARD]
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11
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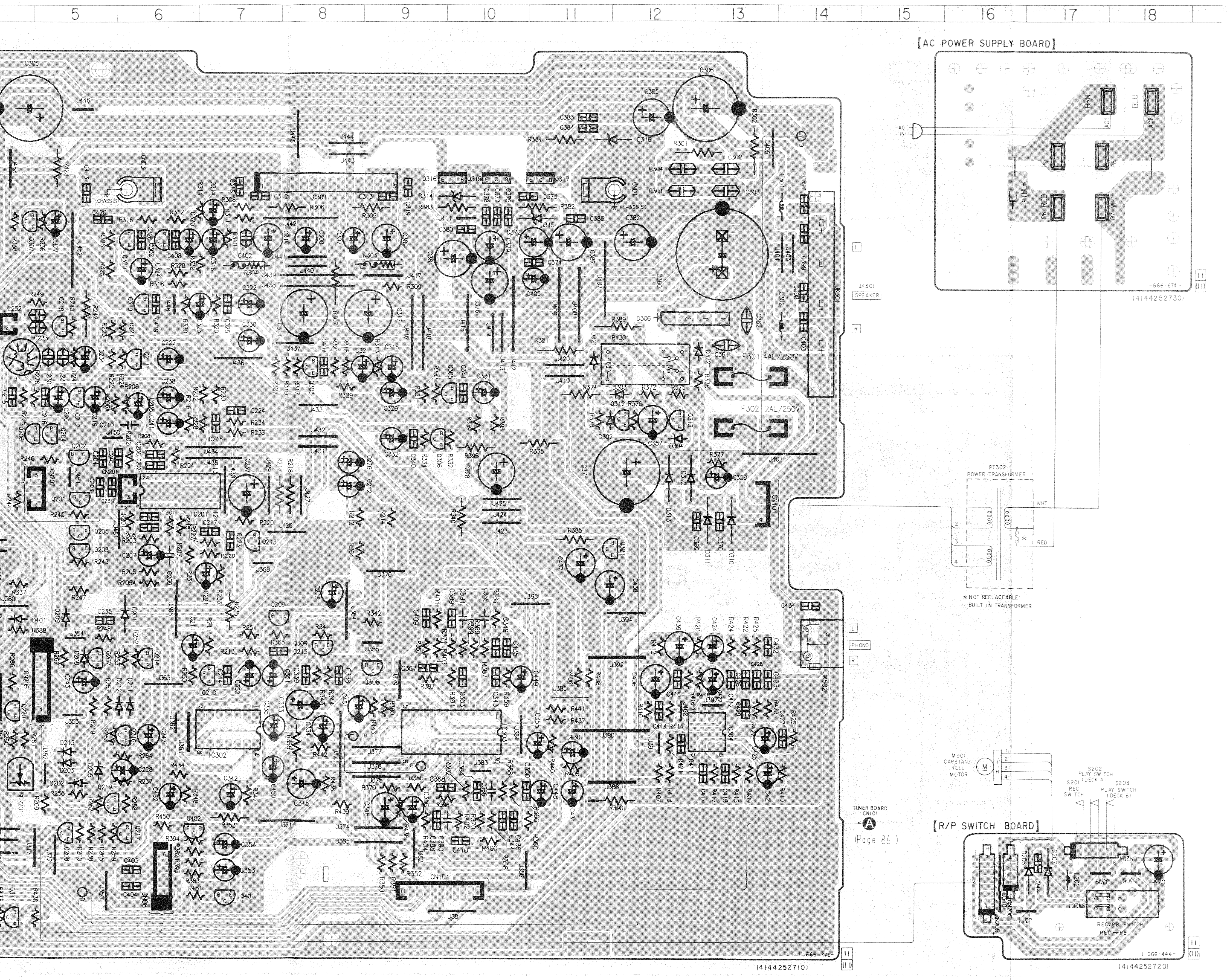
A
B
C
D
E
F
G
H
I
J
K
L
JK302 PHONES
HE901 ERASE HEAD
A DECK
HRP901 RECORD/ PLAYBACK HEAD
B DECK
HP901 PLAYBACK HEAD
PANEL BOARD CN301
(Page 68)
(Page 55)
CD DECODER BOARD CN08
IC302
CN101
RY301
(CHASSIS)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11
12
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14
15
16
17
18
[AC POWER SUPPLY BOARD]
AC IN
BRN
BLU
P BLK
RED
WHT
1-666-674-
(4144252730)
JK301 SPEAKER
F301 4AL/250V
F302 2AL/250V
PT302 POWER TRANSFORMER
WHT
RED
* NOT REPLACEABLE BUILT IN TRANSFORMER
PHONO
M901 CAPSTAN/REEL MOTOR
S202 PLAY SWITCH (DECK A)
S201 REC SWITCH
S203 PLAY SWITCH (DECK B)
TUNER BOARD CN101
A
(Page 86)
[R/P SWITCH BOARD]
REC/PB SWITCH
REC → PB
1-666-776-
(4144252710)
1-666-444-
(4144252720)

- **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D201	H-6	Q202	F-5
D202	J-5	Q203	G-5
D203	I-5	Q204	E-5
D205	I-5	Q205	G-5
D206	K-17	Q206	E-4
D207	K-17	Q207	H-5
D208	H-5	Q208	J-5
D209	H-5	Q209	G-7
D211	H-6	Q210	H-7
D212	H-6	Q211	E-6
D213	I-5	Q212	E-5
D301	G-3	Q213	G-7
D302	E-11	Q214	H-6
D303	E-12	Q216	I-6
D304	F-12	Q217	J-6
D306	D-12	Q218	D-5
D310	G-13	Q219	J-5
D311	G-13	Q220	I-4
D312	F-12	Q301	H-3
D313	F-12	Q302	C-6
D314	C-9	Q303	E-8
D315	C-11	Q305	E-10
D316	B-12	Q306	F-9
D318	J-4	Q307	C-4
D319	J-3	Q308	H-9
D321	D-11	Q309	H-8
D322	D-13	Q311	K-4
D401	H-5	Q312	E-12
		Q313	E-12
IC201	F-6	Q315	B-10
IC301	C-8	Q316	B-9
IC302	I-7	Q317	B-11
IC303	I-10	Q319	D-6
IC304	I-13	Q320	C-6
		Q321	G-12
Q201	F-5	Q401	K-7
		Q402	J-6

Note:

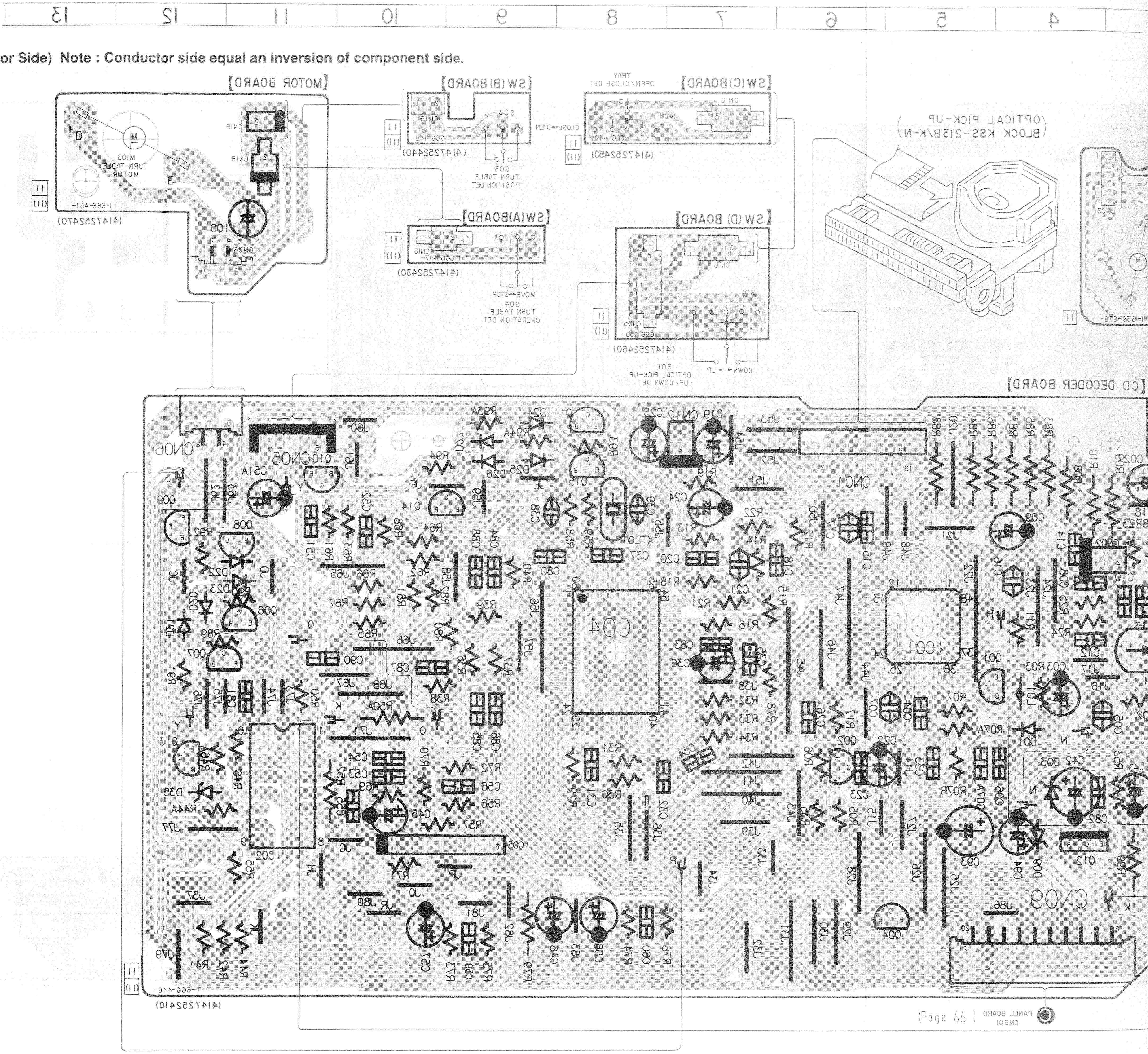
- ○—— : parts extracted from the component side.

5-8. PRINTED WIRING BOARD — CD SECTION —

- See page 14 for Circuit Boards Location.

- Semiconductor Location

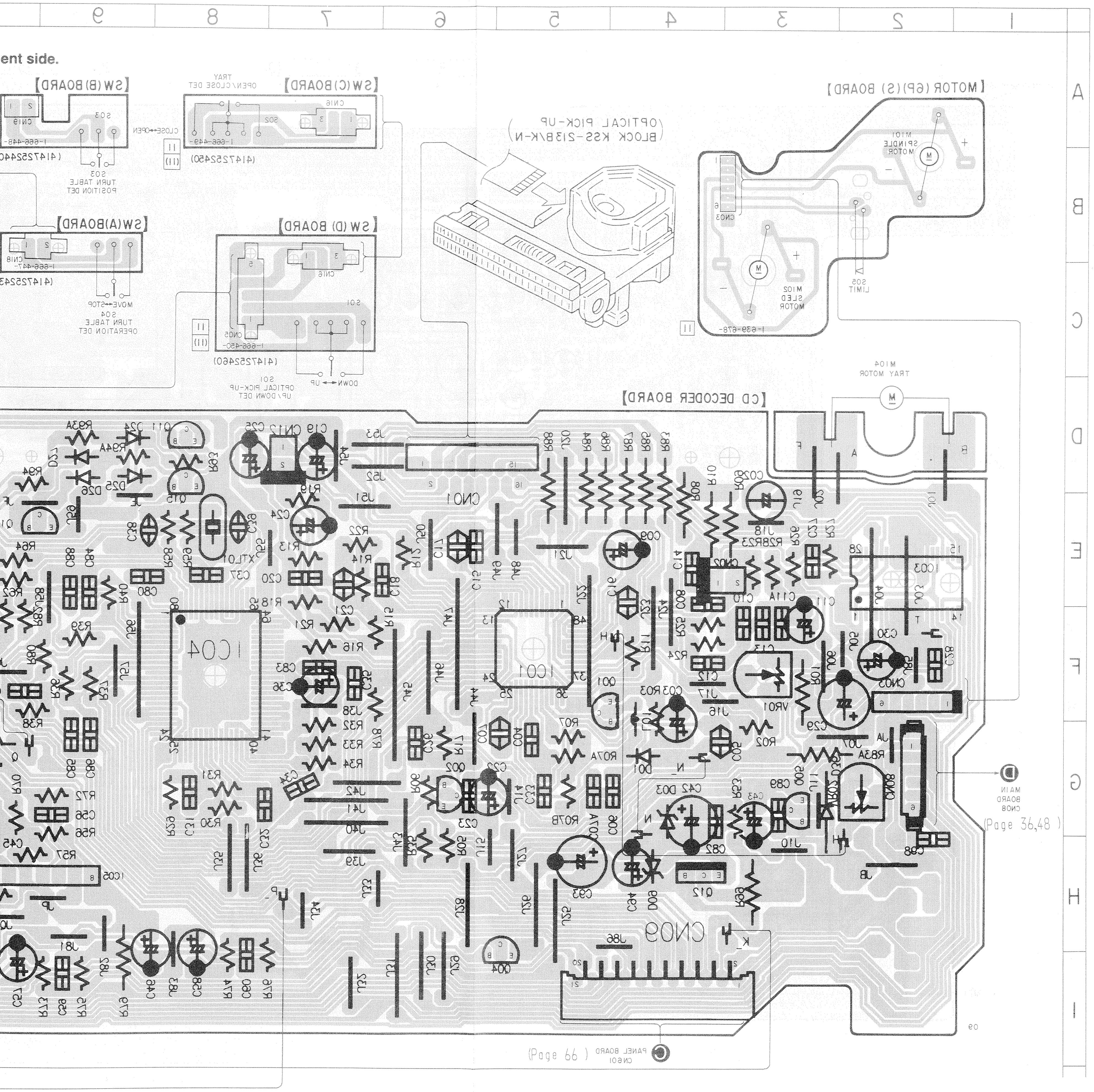
Ref. No.	Location
D01	G-4
D03	G-4
D09	H-4
D20	F-12
D21	F-12
D22	E-11
D23	F-11
D24	D-9
D25	D-9
D26	D-9
D27	D-9
D35	G-12
D36	G-3
IC01	F-5
IC02	H-11
IC03	E-2
IC04	F-8
IC05	H-9
Q01	F-4
Q02	G-6
Q04	I-5
Q05	G-3
Q06	F-11
Q07	F-12
Q08	E-11
Q09	E-12
Q10	D-11
Q11	E-8
Q12	H-4
Q13	G-12
Q14	E-10
Q15	E-8


13
12
11
10
9
8
7
6
5
4
MOTOR BOARD
SW (B) BOARD
SW (C) BOARD
SW (A) BOARD
SW (D) BOARD
OPTICAL PICK-UP BLOCK KSS-213B/K-N
CD DECODER BOARD
IC01
IC02
IC04
IC05
CN01
CN05
CN06
CN09
(Page 66)
PANEL BOARD CN601

(Conductor Side) Note : Conductor side equal an inversion of component side.

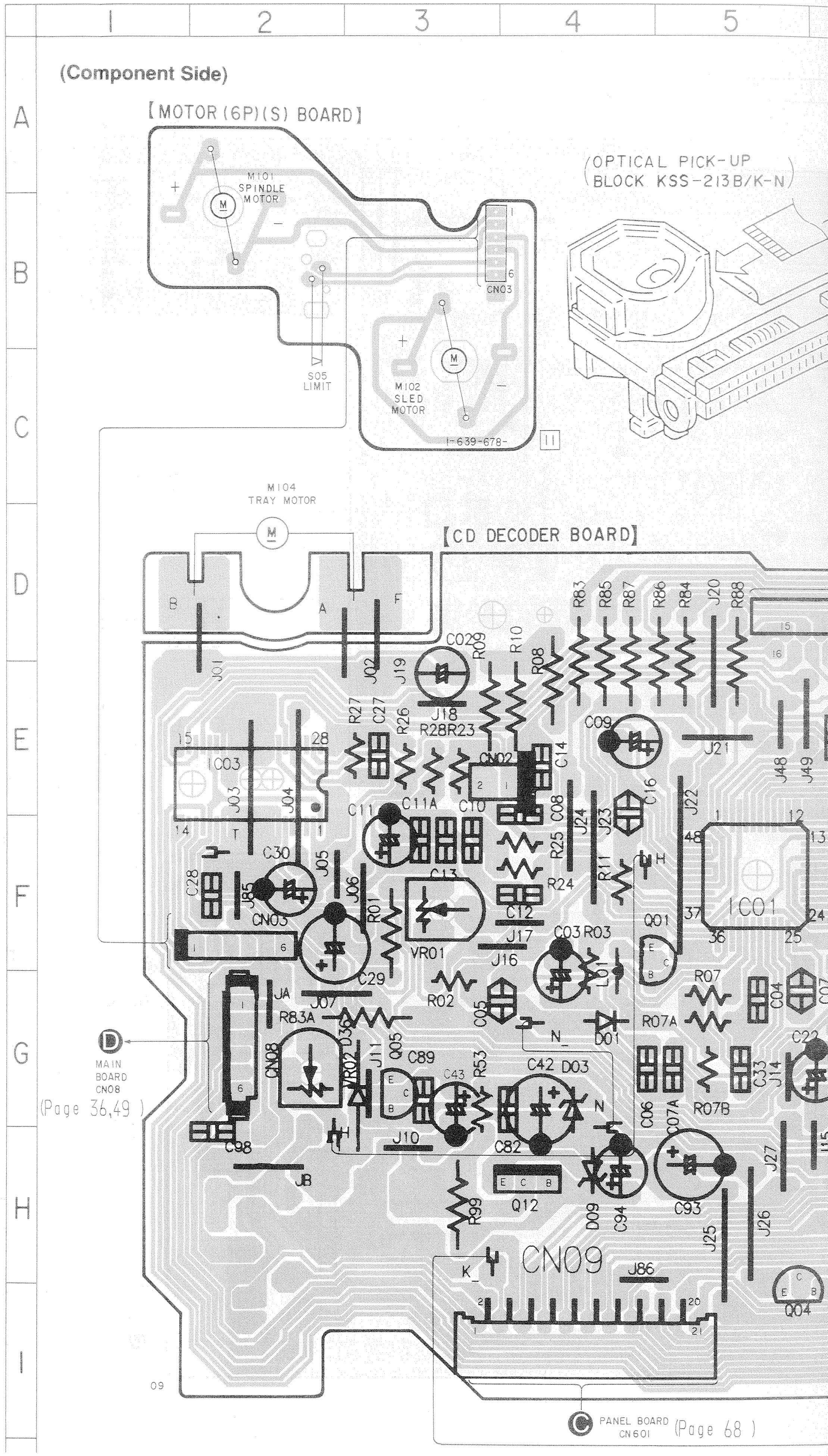
Note:
- ○—— : parts extracted from the component side.

ent side.

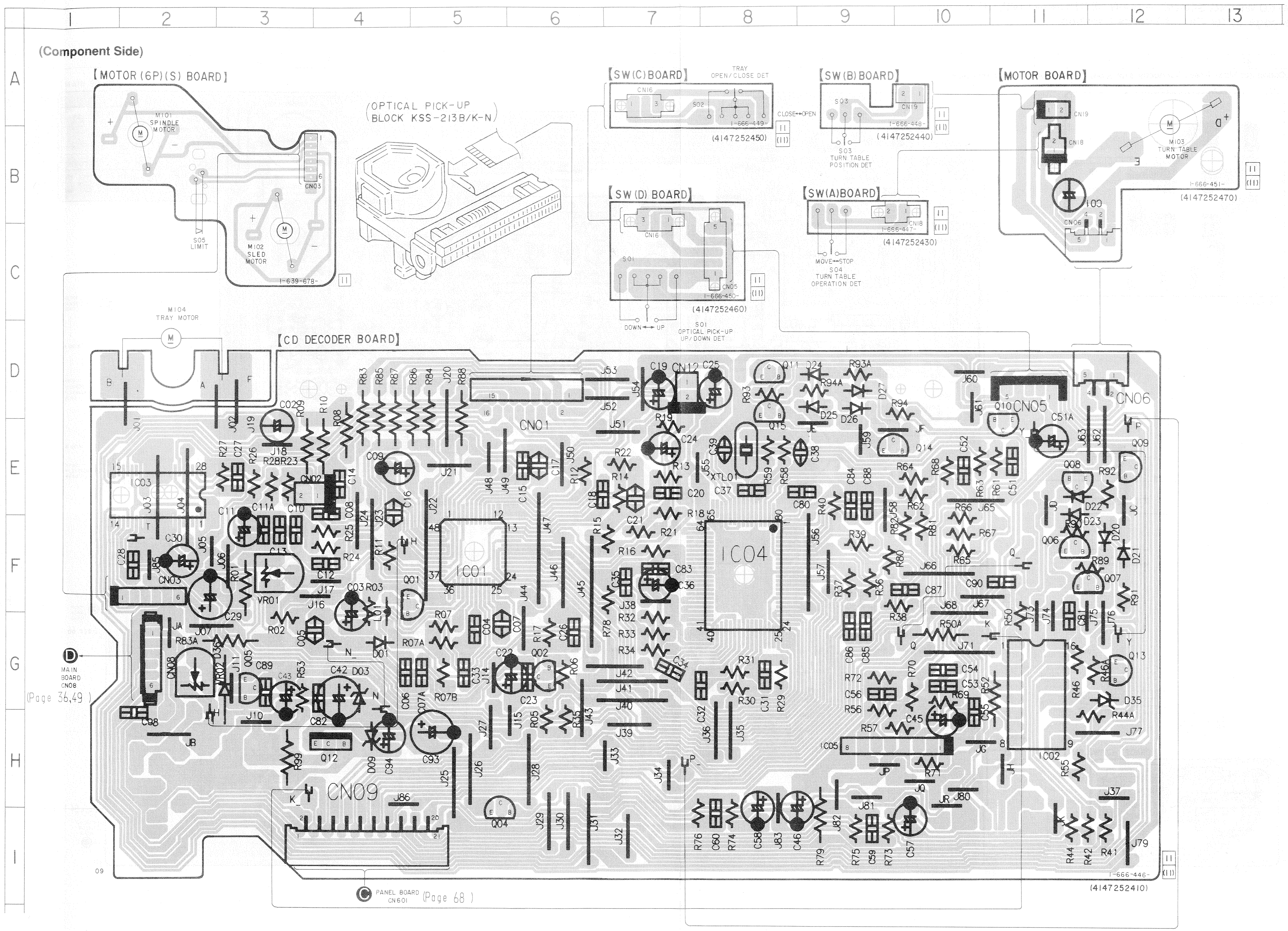


9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
H
I
[SW(B)BOARD]
CN19
S03
1-666-448-
(4147252440)
S03
TURN TABLE
POSITION DET
[SW(C)BOARD]
TRAY
OPEN/CLOSE DET
CN16
S02
1-666-449-
(4147252450)
CLOSE↔OPEN
[SW(A)BOARD]
CN18
1-666-447-
(4147252430)
MOVE↔STOP
S04
TURN TABLE
OPERATION DET
[SW(D) BOARD]
CN16
S01
CN05
1-666-450-
(4147252460)
S01
OPTICAL PICK-UP
UP/DOWN DET
DOWN↔UP
(OPTICAL PICK-UP
BLOCK KSS-213B/K-N)
[MOTOR (6P)(S) BOARD]
M101
SPINDLE
MOTOR
M102
SLED
MOTOR
S05
LIMIT
CN03
1-639-678-
M104
TRAY MOTOR
[CD DECODER BOARD]
IC01
IC03
IC04
IC05
CN01
CN02
CN09
MAIN BOARD CN08
(Page 36,48)
PANEL BOARD CN601
(Page 66)

(Component Side)



1
2
3
4
5
A
B
C
D
E
F
G
H
I
[MOTOR (6P)(S) BOARD]
M101
SPINDLE
MOTOR
M102
SLED
MOTOR
S05
LIMIT
CN03
1-639-678-
(OPTICAL PICK-UP
BLOCK KSS-213B/K-N)
M104
TRAY MOTOR
[CD DECODER BOARD]
IC01
IC03
CN02
CN03
CN08
CN09
MAIN BOARD CN08
(Page 36,49)
PANEL BOARD CN601
(Page 68)

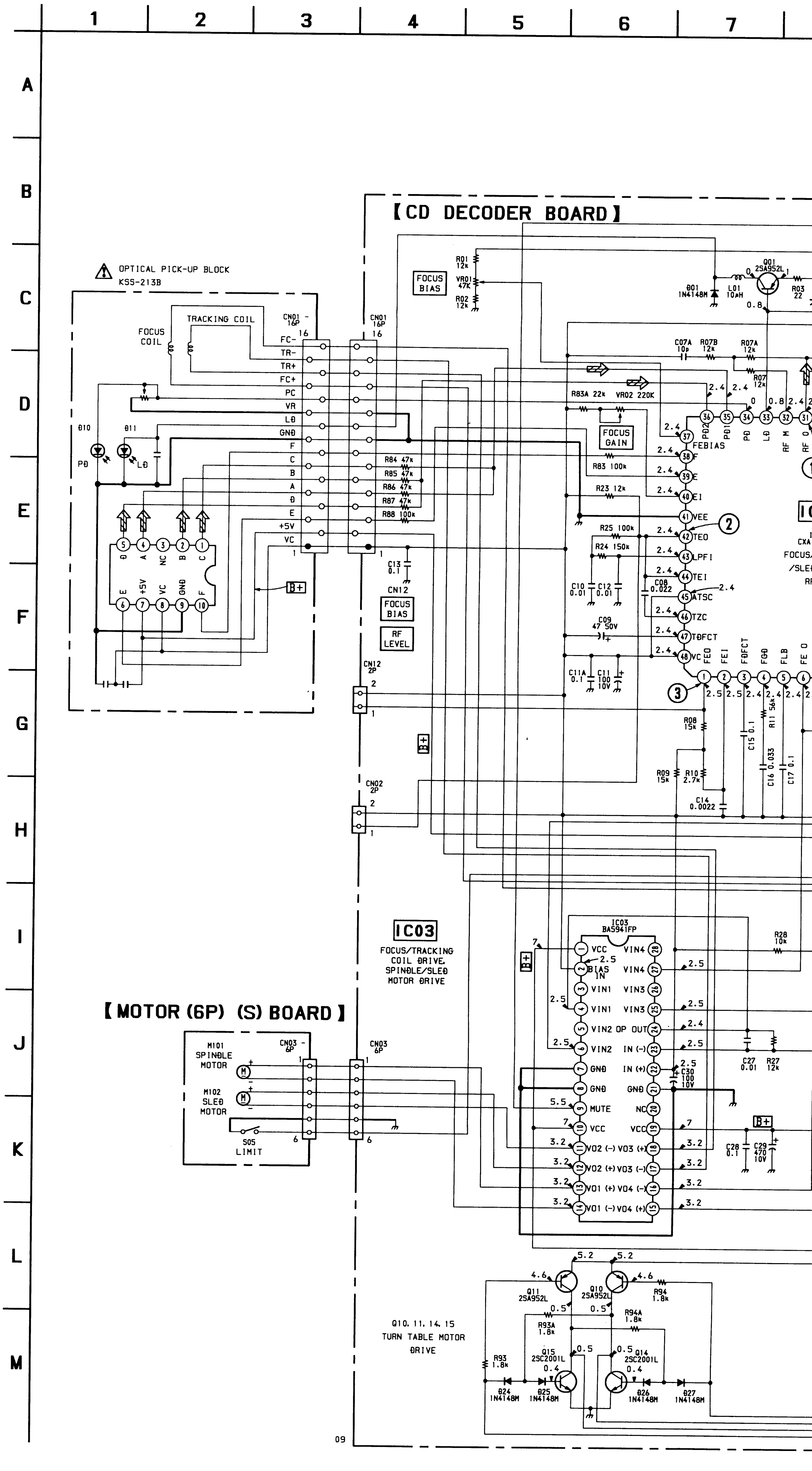


(Component Side)

1
2
3
4
5
6
7
8
9
10
11
12
13
A
B
C
D
E
F
G
H
I
[MOTOR (6P) (S) BOARD]
M101
SPINDLE
MOTOR
CN03
S05
LIMIT
M102
SLED
MOTOR
1-639-678-
(OPTICAL PICK-UP
BLOCK KSS-213B/K-N)
[SW (C) BOARD]
TRAY
OPEN/CLOSE DET
CN16
S02
CLOSE↔OPEN
1-666-449-
(4147252450)
[SW (B) BOARD]
S03
CN19
1-666-448-
(4147252440)
S03
TURN TABLE
POSITION DET
[MOTOR BOARD]
CN19
CN18
M103
TURN TABLE
MOTOR
IC01
CN06
1-666-451-
(4147252470)
[SW (D) BOARD]
CN16
S01
CN05
1-666-450-
(4147252460)
DOWN ↔ UP
S01
OPTICAL PICK-UP
UP/DOWN DET
[SW (A) BOARD]
CN18
1-666-447-
(4147252430)
MOVE↔STOP
S04
TURN TABLE
OPERATION DET
M104
TRAY MOTOR
[CD DECODER BOARD]
CN01
CN05
CN06
CN02
CN03
CN08
CN09
CN12
IC01
IC02
IC03
IC04
IC05
XTL01
VR01
VR02
D
MAIN
BOARD
CN08
(Page 36,49)
C
PANEL BOARD
CN601
(Page 68)
1-666-446-
(4147252410)

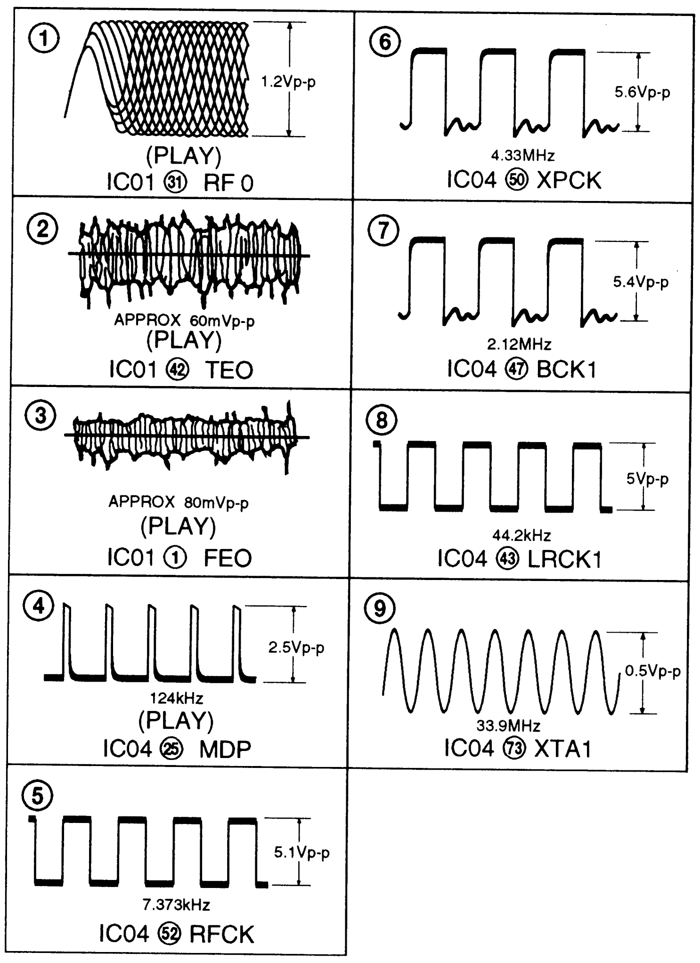
5-9. SCHEMATIC DIAGRAM — CD SECTION —

• See page 29 for IC Block Diagrams.



1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
[CD DECODER BOARD]
OPTICAL PICK-UP BLOCK
KSS-213B
FOCUS COIL
TRACKING COIL
CN01 16P
FC-
TR-
TR+
FC+
PC
VR
LD
GND
F
C
B
A
D
E
+5V
VC
D10
D11
PD
LD
FOCUS BIAS
R01 12k
VR01 47K
R02 12k
D01 1N4148M
L01 10μH
Q01 2SA952L
R03 22
C07A 10p
R07B 12k
R07A 12k
R83A 22k
VR02 220K
FOCUS GAIN
R83 100k
R84 47k
R85 47k
R86 47k
R87 47k
R88 100k
R23 12k
R25 100k
R24 150k
C10 0.01
C12 0.01
C08 0.022
C09 47 50V
C11A 0.1
C11 100 10V
C13 0.1
CN12
FOCUS BIAS
RF LEVEL
CN12 2P
CN02 2P
B+
FEBIAS
VEE
TEO
LPFI
TEI
ATSC
TZC
TDFCT
VC
R08 15k
R09 15k
R10 2.7k
C14 0.0022
C15 0.1
C16 0.033
C17 0.1
R11 56k
IC03
FOCUS/TRACKING COIL DRIVE, SPINDLE/SLED MOTOR DRIVE
IC03 BA5941FP
VCC
BIAS IN
VIN1
VIN2 OP OUT
VIN2
GND
MUTE
VO2 (-)
VO2 (+)
VO1 (+)
VO1 (-)
VIN4
VIN3
IN (-)
IN (+)
NC
VO3 (+)
VO3 (-)
VO4 (-)
VO4 (+)
R28 10k
C27 0.01
R27 12k
C28 0.1
C29 470 10V
C30 100 10V
[MOTOR (6P) (S) BOARD]
M101 SPINDLE MOTOR
M102 SLED MOTOR
S05 LIMIT
CN03 6P
Q10, 11, 14, 15
TURN TABLE MOTOR DRIVE
Q11 2SA952L
Q10 2SA952L
Q15 2SC2001L
Q14 2SC2001L
R93 1.8k
R93A 1.8k
R94 1.8k
R94A 1.8k
D24 1N4148M
D25 1N4148M
D26 1N4148M
D27 1N4148M
09

• Waveforms

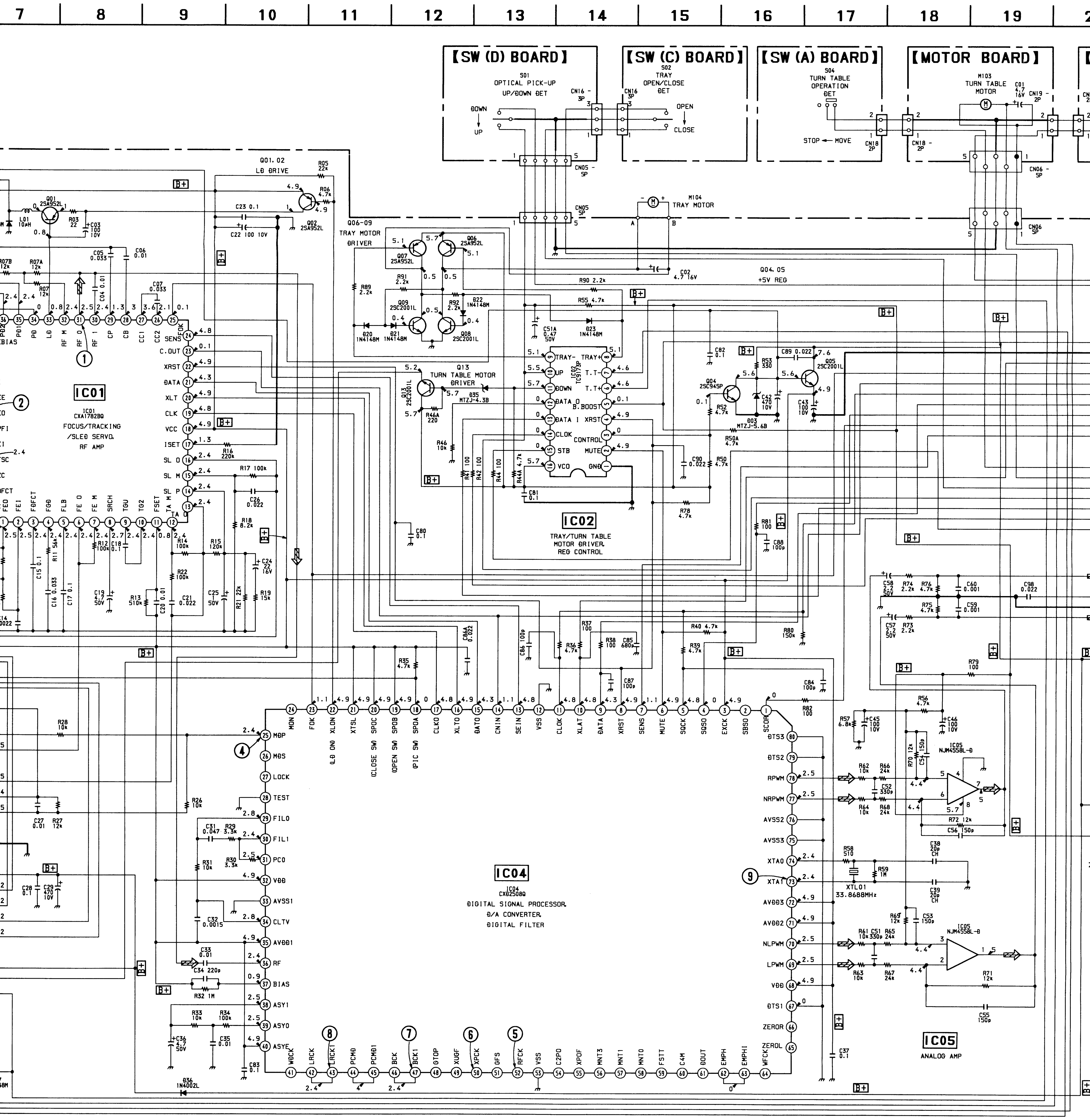


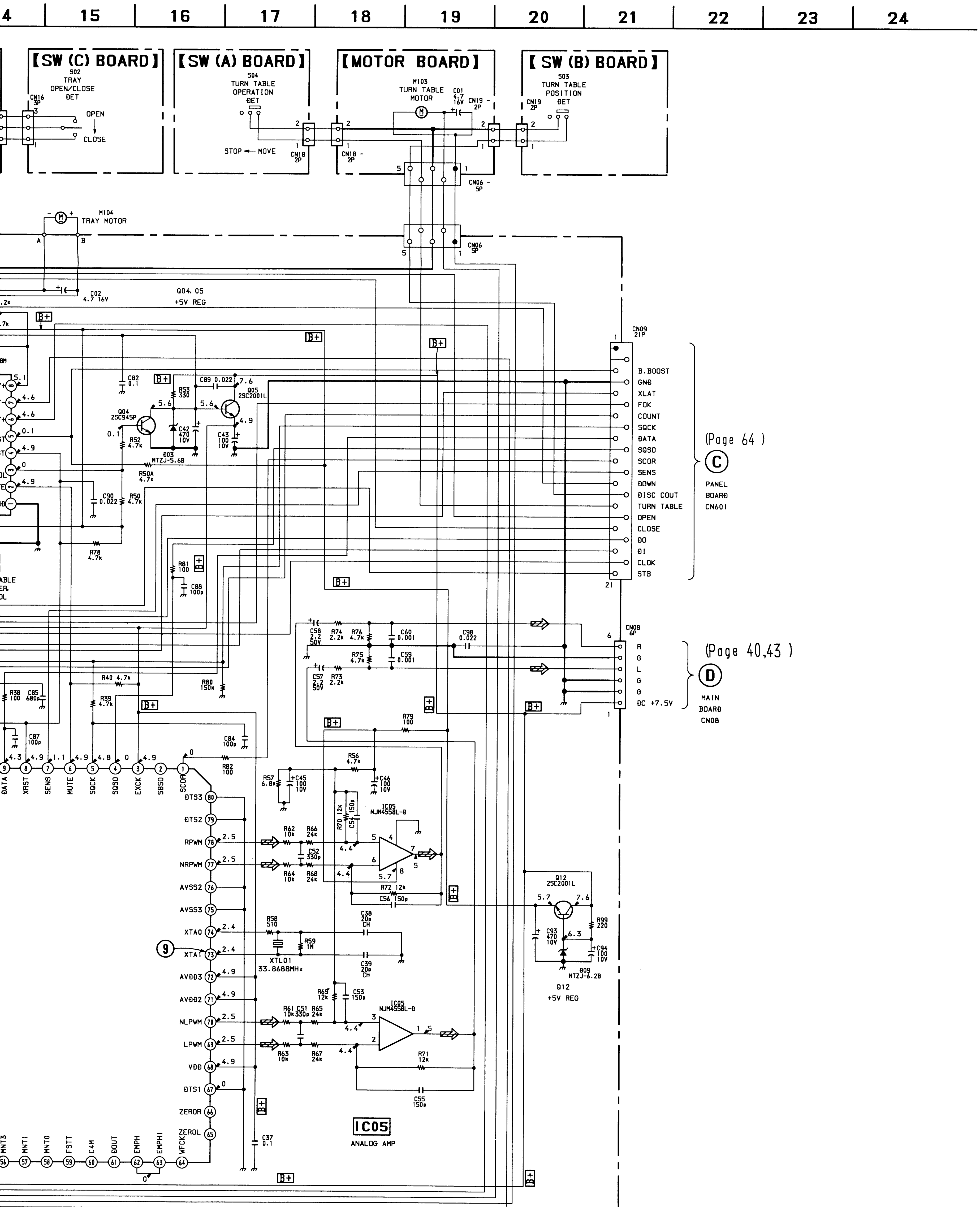
Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

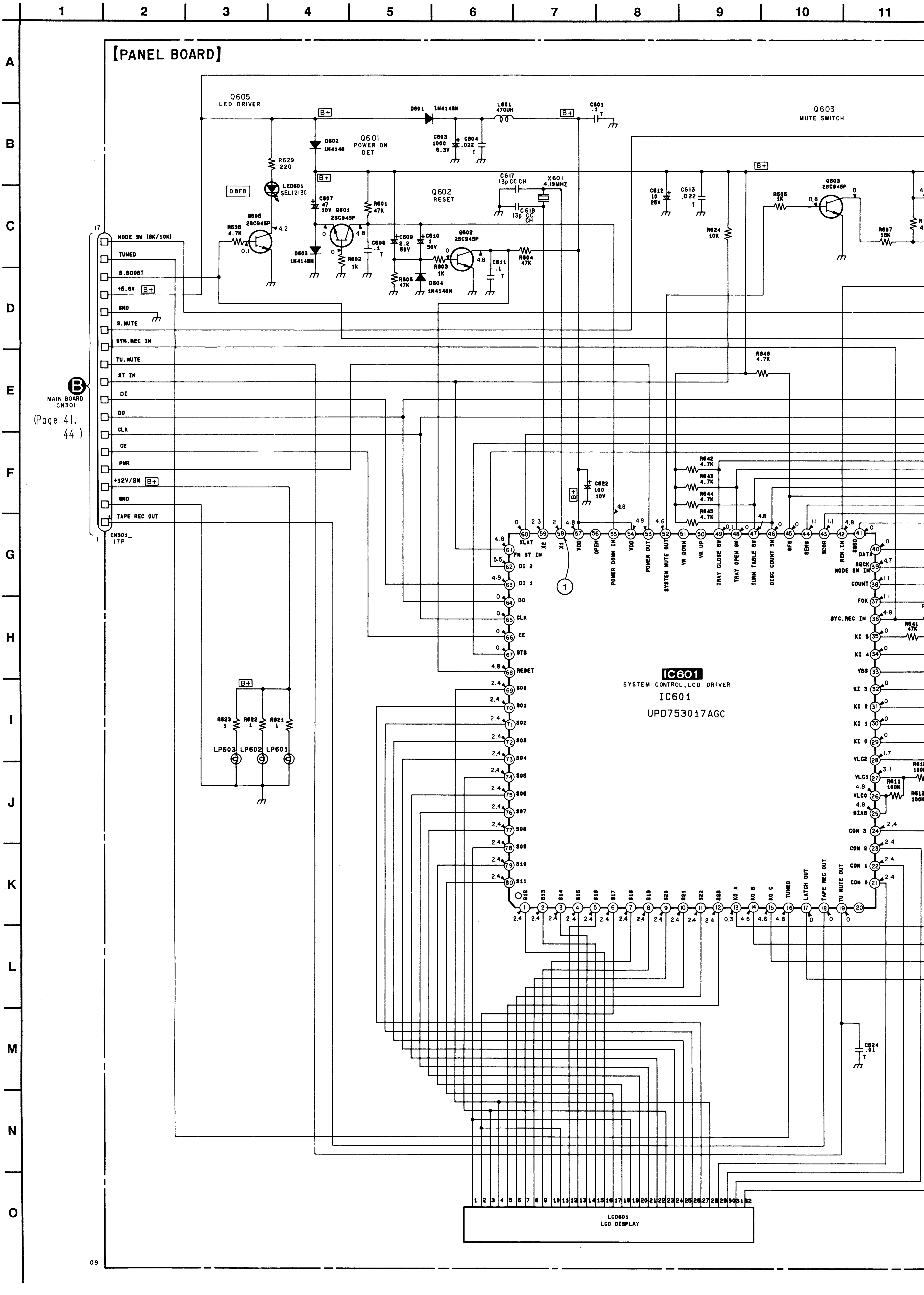
- B+ : B+ Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
- Voltages are taken with a VOM (Input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : CD

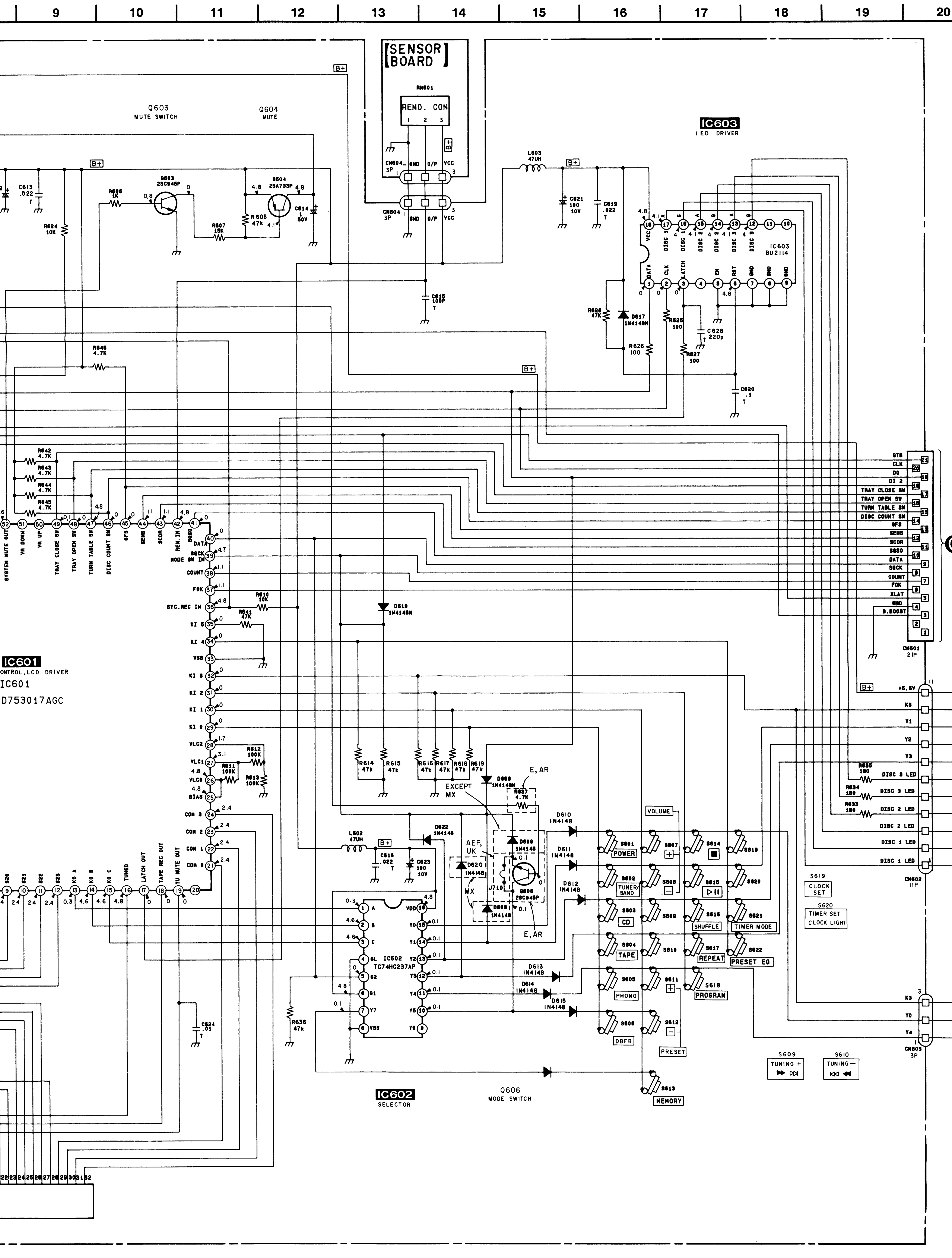

7
8
9
10
11
12
13
14
15
16
17
18
19
【SW (D) BOARD】
S01 OPTICAL PICK-UP UP/DOWN DET
DOWN
UP
CN16 - 3P
【SW (C) BOARD】
S02 TRAY OPEN/CLOSE DET
OPEN
CLOSE
【SW (A) BOARD】
S04 TURN TABLE OPERATION DET
STOP ← MOVE
CN18 2P
【MOTOR BOARD】
M103 TURN TABLE MOTOR
C01 4.7 16V
CN19 - 2P
CN05 - 5P
CN06 - 5P
M104 TRAY MOTOR
C02 4.7 16V
Q01, 02 LD DRIVE
Q01 2SA952L
Q02 2SA952L
Q06-09 TRAY MOTOR DRIVER
Q04, 05 +5V REG
Q13 TURN TABLE MOTOR DRIVER
IC01
IC01 CXA1782BQ FOCUS/TRACKING /SLED SERVO, RF AMP
IC02
IC02 TC9173P
TRAY/TURN TABLE MOTOR DRIVER, REG CONTROL
IC04
IC04 CXD2508Q DIGITAL SIGNAL PROCESSOR, D/A CONVERTER, DIGITAL FILTER
IC05
IC05 NJM4558L-D
ANALOG AMP
XTL01 33.8688MHz
B+
①
②
④
⑤
⑥
⑦
⑧
⑨

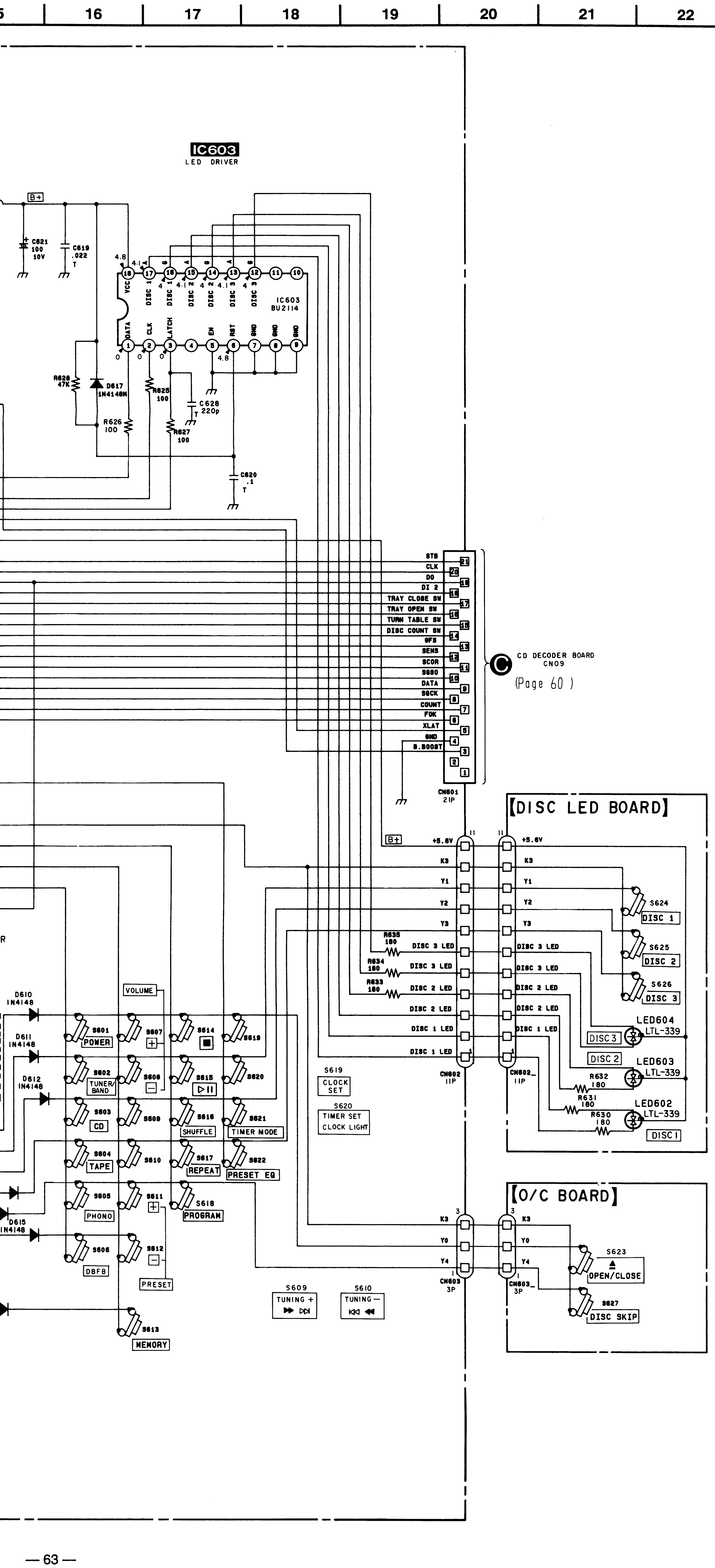

4
15
16
17
18
19
20
21
22
23
24
【SW (C) BOARD】
S02 TRAY OPEN/CLOSE DET
CN16 3P
OPEN
CLOSE
【SW (A) BOARD】
S04 TURN TABLE OPERATION DET
STOP ← MOVE
CN18 2P
【MOTOR BOARD】
M103 TURN TABLE MOTOR
C01 4.7 16V
CN19 2P
CN18 2P
CN06 5P
【SW (B) BOARD】
S03 TURN TABLE POSITION DET
CN19 2P
M104 TRAY MOTOR
C02 4.7 16V
Q04, 05 +5V REG
Q04 2SC945P
Q05 2SC2001L
D03 MTZJ-5.6B
C42 470 10V
C43 100 10V
C89 0.022
R53 330
C82 0.1
R52 4.7k
R50A 4.7k
R50 4.7k
C90 0.022
R78 4.7k
R81 100
C88 100p
CN09 21P
B.BOOST
GND
XLAT
FOK
COUNT
SQCK
DATA
SQSO
SCOR
SENS
DOWN
DISC COUT
TURN TABLE
OPEN
CLOSE
DO
DI
CLOK
STB
(Page 64)
Ⓒ
PANEL BOARD CN601
CN08 6P
R
G
L
G
G
DC +7.5V
(Page 40,43)
Ⓓ
MAIN BOARD CN08
C58 2.2 50V
R74 2.2k
R76 4.7k
C60 0.001
C98 0.022
R75 4.7k
C59 0.001
C57 2.2 50V
R73 2.2k
R40 4.7k
R80 150k
R38 100
C85 680p
R39 4.7k
C87 100p
C84 100p
R82 100
R79 100
DATA
XRST
SENS
MUTE
SQCK
SQSO
EXCK
SBSO
SCOR
DTS3
DTS2
RPWM
NRPWM
AVSS2
AVSS3
XTAO
XTAI
AVDD3
AVDD2
NLPWM
LPWM
VDD
DTS1
ZEROR
ZEROL
MNT3
MNT1
MNT0
FSTT
C4M
DOUT
EMPH
EMPHI
WFCK
⑨
R56 4.7k
R57 6.8k
C45 100 10V
C46 100 10V
IC05 NJM4558L-D
R70 12k
C54 150p
R62 10k
R66 24k
C52 330p
R64 10k
R68 24k
R72 12k
C56 150p
C38 20p CH
R58 510
R59 1M
XTL01 33.8688MHz
C39 20p CH
R69 12k
C53 150p
R61 10k
C51 330p
R65 24k
R63 10k
R67 24k
R71 12k
C55 150p
IC05
ANALOG AMP
C37 0.1
Q12 2SC2001L
R99 220
C93 470 10V
C94 100 10V
D09 MTZJ-6.2B
Q12 +5V REG
B+

5-10. SCHEMATIC DIAGRAM — PANEL SECTION —

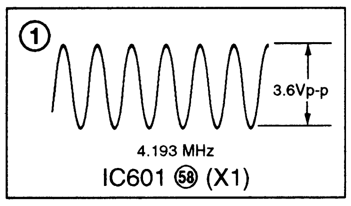
- See page 33 for IC Block Diagrams.
- See page 87 for IC Pin Functions.


[PANEL BOARD]
Q605 LED DRIVER
Q601 POWER ON DET
Q602 RESET
Q603 MUTE SWITCH
D601 1N4148M
L601 470UH
C601 .1
D602 1N4148
R629 220
LED601 SEL1213C
DBFB
R638 4.7K
Q605 2SC945P
C607 47 10V
Q601 2SC945P
R601 47K
D603 1N4148M
R602 1k
C608 .1
C609 2.2 50V
C610 1 50V
R605 47K
D604 1N4148M
R603 1K
Q602 2SC945P
C611 .1
R604 47K
C603 1000 6.3V
C604 .022
C617 13p CC CH
X601 4.19MHZ
C618 13p CC CH
C612 10 25V
C613 .022
R624 10K
R606 1K
Q603 2SC945P
R607 15K
R646 4.7K
R642 4.7K
R643 4.7K
R644 4.7K
R645 4.7K
C622 100 10V
MODE SW (9K/10K)
TUNED
B.BOOST
+5.6V
GND
S.MUTE
SYN.REC IN
TU.MUTE
ST IN
DI
DO
CLK
CE
PWR
+12V/SW
GND
TAPE REC OUT
CN301 17P
MAIN BOARD CN301
(Page 41, 44)
B
R623 1
R622 1
R621 1
LP603
LP602
LP601
IC601
SYSTEM CONTROL,LCD DRIVER
IC601
UPD753017AGC
XLAT
X2
X1
VDD
OPEN
POWER DOWN IN
VDD
POWER OUT
SYSTEM MUTE OUT
VR DOWN
VR UP
TRAY CLOSE SW
TRAY OPEN SW
TURN TABLE SW
DISC COUNT SW
GFS
SENS
SCOR
REM.IN
SSBO
DATA
SBCK
MODE SW IN
COUNT
FOK
SYC.REC IN
KI 5
KI 4
VSS
KI 3
KI 2
KI 1
KI 0
VLC2
VLC1
VLC0
BIAS
COM 3
COM 2
COM 1
COM 0
FM ST IN
DI 2
DI 1
DO
CLK
CE
STB
RESET
S00
S01
S02
S03
S04
S05
S06
S07
S08
S09
S10
S11
S12
S13
S14
S15
S16
S17
S18
S19
S20
S21
S22
S23
KO A
KO B
KO C
TUNED
LATCH OUT
TAPE REC OUT
TU MUTE OUT
R641 47K
R611 100K
R612 100K
R613 100K
C624 .01
LCD601 LCD DISPLAY
1
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
1
2
3
4
5
6
7
8
9
10
11


9
10
11
12
13
14
15
16
17
18
19
20
SENSOR BOARD
RM601
REMO. CON
Q603
MUTE SWITCH
Q604
MUTE
IC603
LED DRIVER
IC603
BU2114
L603
47UH
C621
100
10V
C619
.022
C613
.022
R606
1K
Q603
2SC945P
Q604
2SA733P
R608
47k
C614
1
50V
R607
15K
R624
10K
CN604
3P
GND
O/P
VCC
C615
100P
R628
47K
D617
1N4148M
R625
100
C628
220p
R626
100
R627
100
C620
.1
R646
4.7K
R642
4.7K
R643
4.7K
R644
4.7K
R645
4.7K
SYSTEM MUTE OUT
VR DOWN
VR UP
TRAY CLOSE SW
TRAY OPEN SW
TURN TABLE SW
DISC COUNT SW
GFS
SENS
SCOR
REM.IN
SBSO
DATA
SQCK
MODE SW IN
COUNT
FOK
SYC.REC IN
KI 5
KI 4
VSS
KI 3
KI 2
KI 1
KI 0
VLC2
VLC1
VLC0
BIAS
CON 3
CON 2
CON 1
CON 0
R610
10K
R641
47K
R612
100K
R611
100K
R613
100K
IC601
CONTROL,LCD DRIVER
IC601
D753017AGC
KO A
KO B
KO C
TUNED
LATCH OUT
TAPE REC OUT
TU MUTE OUT
D619
1N4148M
R614
47k
R615
47k
R616
47k
R617
47k
R618
47k
R619
47k
D699
1N4148M
E, AR
EXCEPT MX
R637
4.7K
D622
1N4148
AEP, UK
D609
1N4148
D620
1N4148
MX
J710
Q606
2SC945P
D608
1N4148
E, AR
L602
47UH
C616
.022
C623
100
10V
IC602
TC74HC237AP
VDD
Y0
Y1
Y2
Y3
Y4
Y5
Y6
Y7
VSS
GL
G2
G1
C624
.01
R636
47k
IC602
SELECTOR
Q606
MODE SWITCH
D610
1N4148
D611
1N4148
D612
1N4148
D613
1N4148
D614
1N4148
D615
1N4148
VOLUME
S601 POWER
S602 TUNER/BAND
S603 CD
S604 TAPE
S605 PHONO
S606 DBFB
S607 +
S608 −
S609
S610
S611 +
S612 −
PRESET
S613 MEMORY
S614 ■
S615 ▷II
S616 SHUFFLE
S617 REPEAT
S618 PROGRAM
S619
S620
S621 TIMER MODE
S622 PRESET EQ
S619 CLOCK SET
S620 TIMER SET CLOCK LIGHT
S609 TUNING + ▶▶ ▷▷I
S610 TUNING − I◁◁ ◀◀
STB
CLK
DO
DI 2
TRAY CLOSE SW
TRAY OPEN SW
TURN TABLE SW
DISC COUNT SW
GFS
SENS
SCOR
SBSO
DATA
SQCK
COUNT
FOK
XLAT
GND
B.BOOST
CN601
21P
+5.6V
K3
Y1
Y2
Y3
R635 180 DISC 3 LED
R634 180 DISC 3 LED
R633 180 DISC 2 LED
DISC 2 LED
DISC 1 LED
DISC 1 LED
CN602
11P
K3
Y0
Y4
CN603
3P
B+


15
16
17
18
19
20
21
22
23
IC603
LED DRIVER
IC603
BU2114
B+
C621 100 10V
C619 .022 T
VCC
DISC 1
DISC 2
DISC 3
DATA
CLK
LATCH
EN
RST
GND
R628 47K
D617 1N4148M
R625 100
R626 100
R627 100
C628 220p
C620 .1
STB
CLK
DO
DI 2
TRAY CLOSE SW
TRAY OPEN SW
TURN TABLE SW
DISC COUNT SW
GFS
SENS
SCOR
SBSO
DATA
SBCK
COUNT
FOK
XLAT
GND
B.BOOST
CN601 21P
CD DECODER BOARD CN09
(Page 60)
[DISC LED BOARD]
+5.6V
K3
Y1
Y2
Y3
DISC 3 LED
DISC 2 LED
DISC 1 LED
R635 180
R634 180
R633 180
CN602 11P
S624
DISC 1
S625
DISC 2
S626
DISC 3
LED604 LTL-339
LED603 LTL-339
LED602 LTL-339
DISC 3
DISC 2
DISC 1
R632 180
R631 180
R630 180
[O/C BOARD]
K3
Y0
Y4
CN603 3P
S623
OPEN/CLOSE
S627
DISC SKIP
D610 1N4148
D611 1N4148
D612 1N4148
D615 1N4148
VOLUME
S601 POWER
S602 TUNER/BAND
S603 CD
S604 TAPE
S605 PHONO
S606 DBFB
S607 +
S608 −
S609
S610
S611 +
S612 −
PRESET
S613 MEMORY
S614 ■
S615 ▷II
S616 SHUFFLE
S617 REPEAT
S618 PROGRAM
S619
S620
S621 TIMER MODE
S622 PRESET EQ
S619 CLOCK SET
S620 TIMER SET CLOCK LIGHT
S609 TUNING + ▶▶ ▶▶I
S610 TUNING − I◀◀ ◀◀

• Waveform

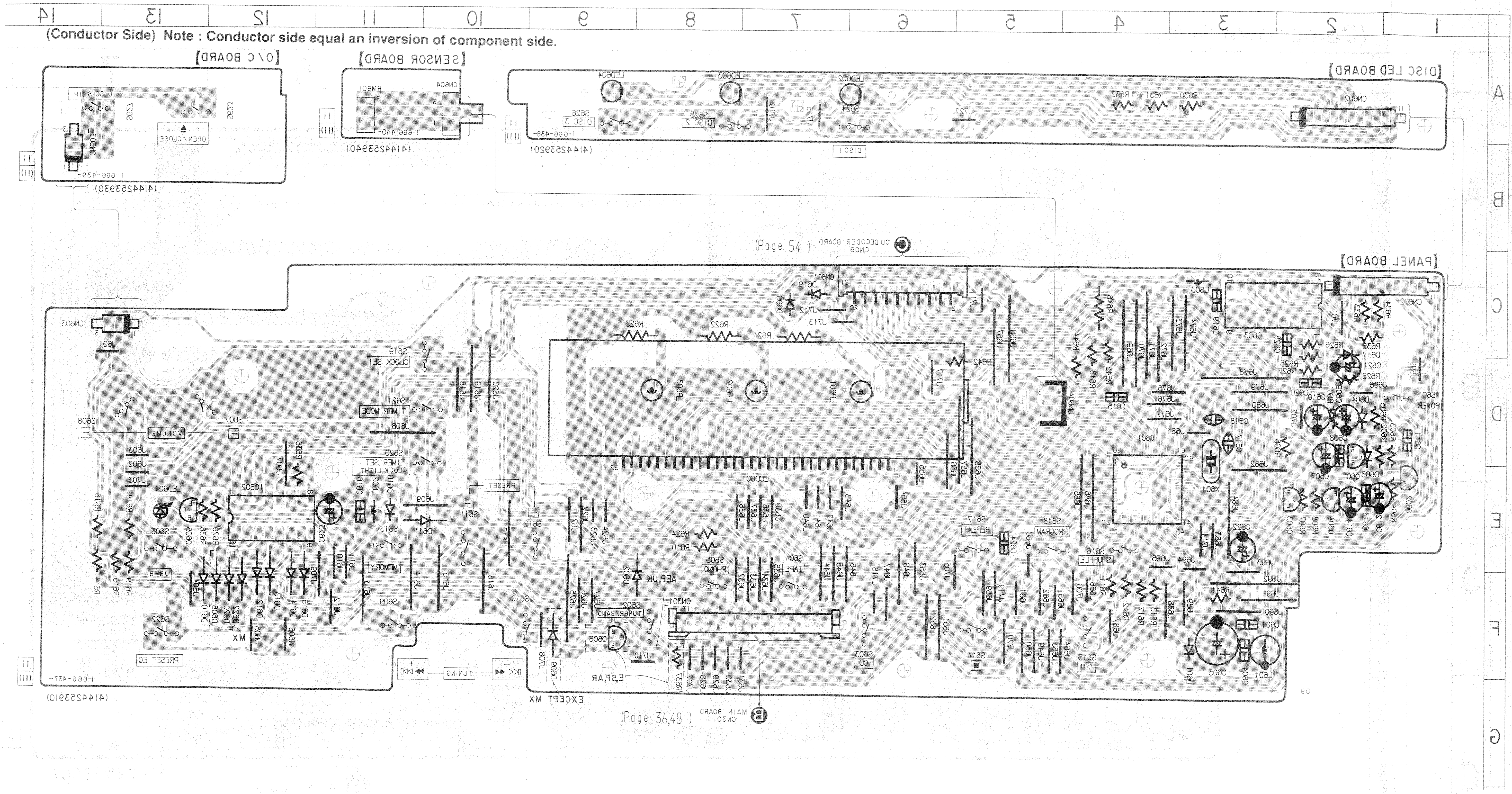


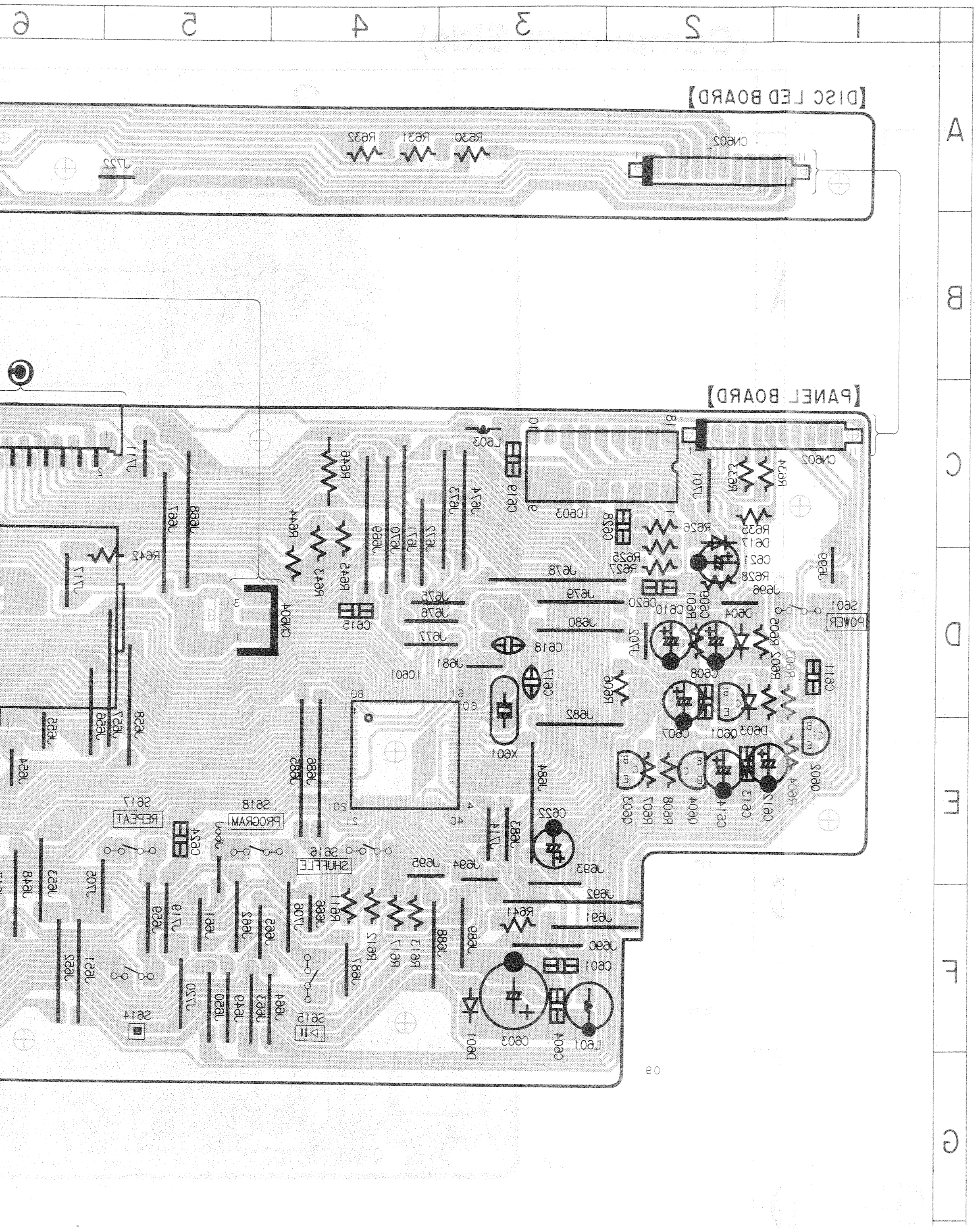
Note:

- All capacitors are in µF unless otherwise noted. pF:µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- △ : internal component.
- ▭ : panel designation.
- B+ : B+ Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
- Voltages are taken with a VOM (Input impedance 10MΩ).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

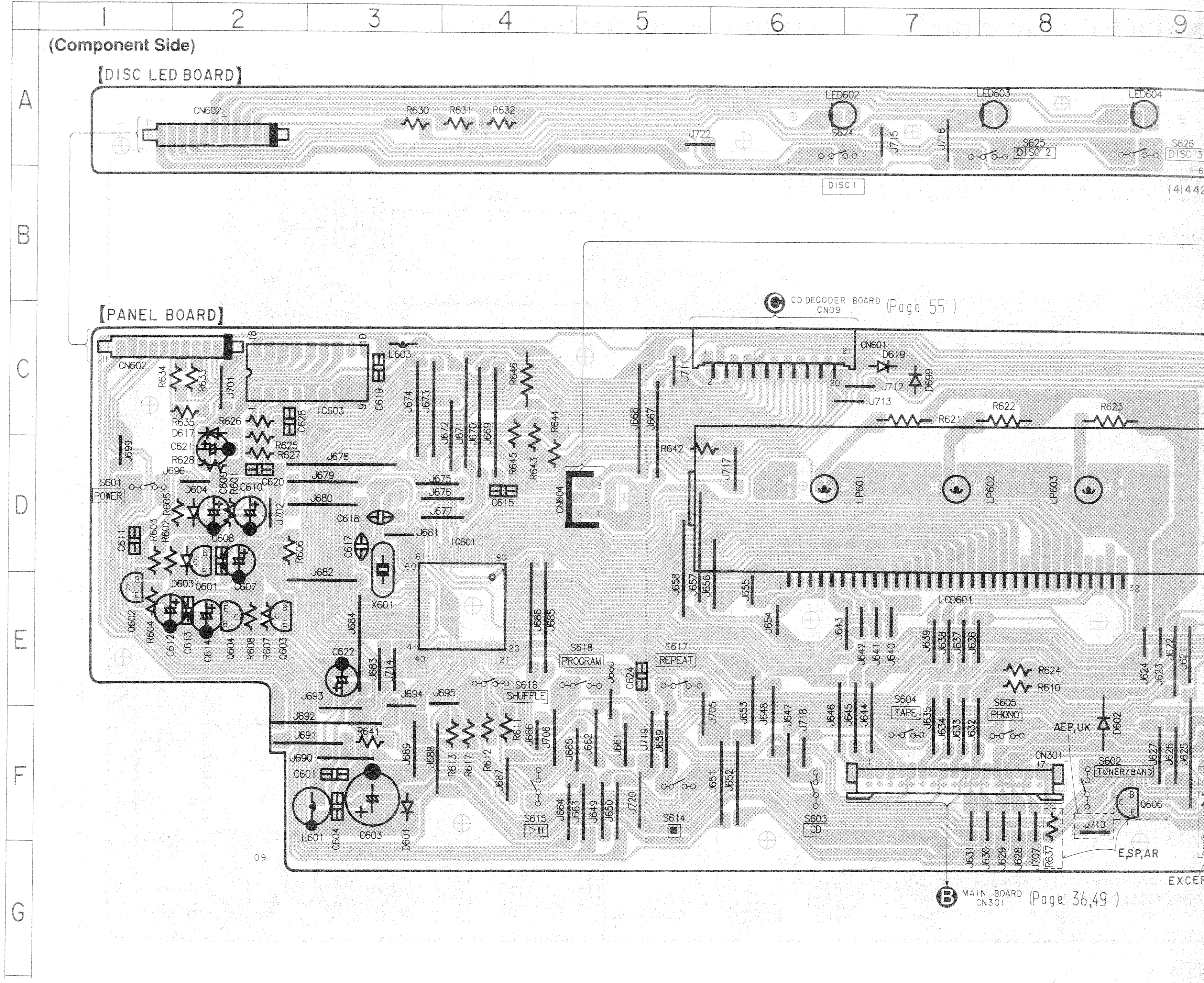
5-11. PRINTED WIRING BOARD — PANEL SECTION —

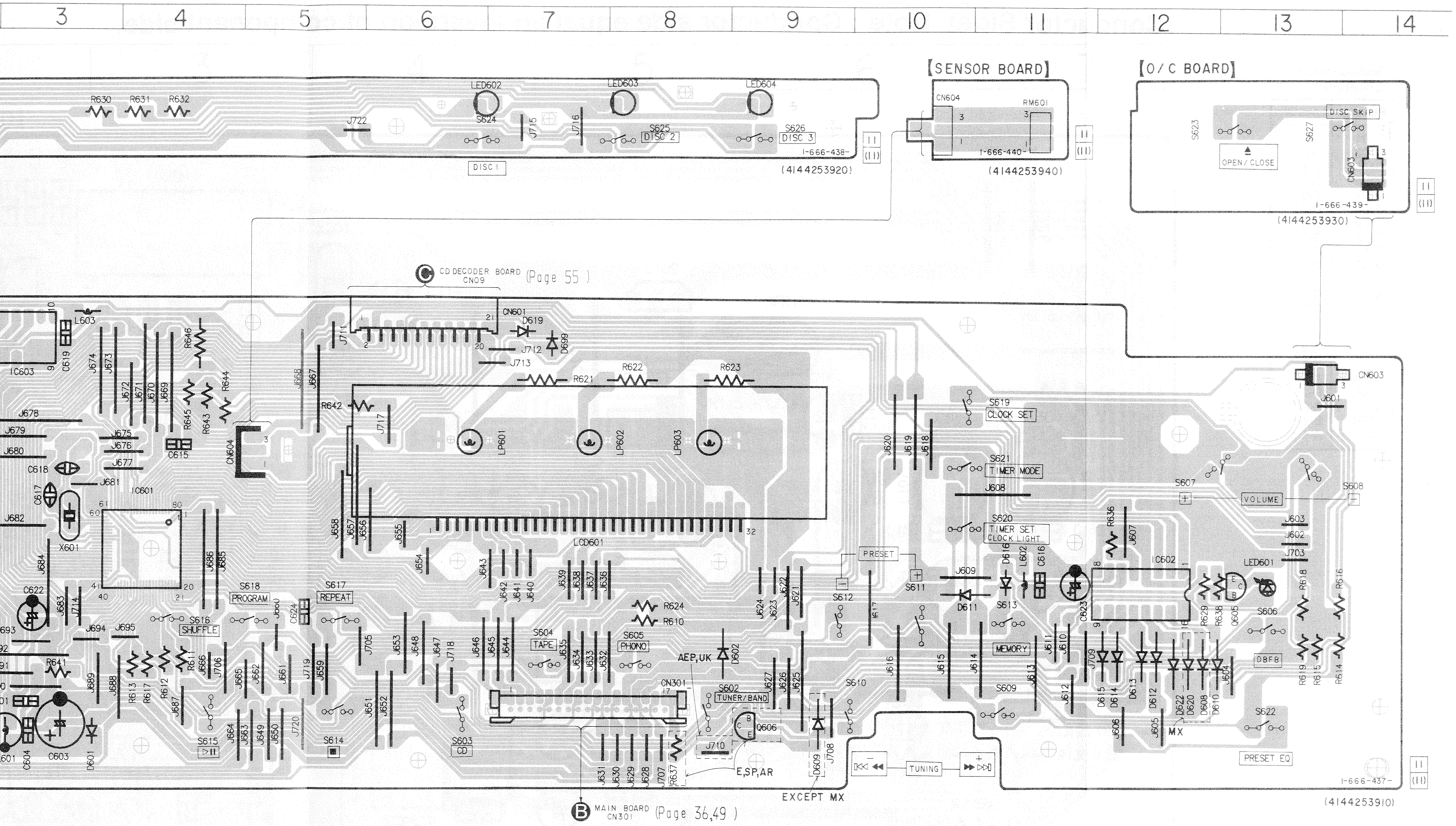
- See page 14 for Circuit Boards Location.


14
13
12
11
10
9
8
7
6
5
4
3
2
1
A
B
C
D
E
F
G
(Conductor Side) Note : Conductor side equal an inversion of component side.
(Page 54)
(Page 36,48)
EXCEPT MX



(Component Side)


[DISC LED BOARD]
[PANEL BOARD]
CD DECODER BOARD CN09 (Page 55)
MAIN BOARD CN301 (Page 36,49)
AEP,UK
E,SP,AR
EXCEP
LED602
LED603
LED604
S624 DISC 1
S625 DISC 2
S626 DISC 3
CN601
CN602
CN604
IC601
IC603
LCD601
X601
S601 POWER
S602 TUNER/BAND
S603 CD
S604 TAPE
S605 PHONO
S614
S615
S616 SHUFFLE
S617 REPEAT
S618 PROGRAM


3
4
5
6
7
8
9
10
11
12
13
14
[SENSOR BOARD]
[O/C BOARD]
(4144253920)
(4144253940)
(4144253930)
(4144253910)
1-666-438-
1-666-440-
1-666-439-
1-666-437-
CD DECODER BOARD CN09 (Page 55)
MAIN BOARD CN301 (Page 36,49)
DISC 1
DISC 2
DISC 3
DISC SKIP
OPEN/CLOSE
CLOCK SET
TIMER MODE
TIMER SET CLOCK LIGHT
VOLUME
PRESET
MEMORY
DBFB
PRESET EQ
TUNING
TAPE
PHONO
TUNER/BAND
CD
PROGRAM
REPEAT
SHUFFLE
AEP,UK
E,SP,AR
EXCEPT MX
MX
LCD601
IC601
IC602
IC603
LED601
LED602
LED603
LED604
CN601
CN603
CN604
X601

- Semiconductor Location

Ref. No.	Location
D601	F-3
D602	F-9
D603	E-2
D604	D-2
D608	F-12
D610	F-12
D611	E-10
D612	F-12
D613	F-12
D614	F-12
D615	F-12
D616	E-11
D617	C-2
D619	C-7
D622	F-12
D699	C-7
LED601	E-13
LED602	A-6
LED603	A-8
LED604	A-9
IC601	D-4
IC602	E-12
IC603	C-3
Q601	E-2
Q602	E-1
Q603	E-2
Q604	E-2
Q605	E-13
Q606	F-9

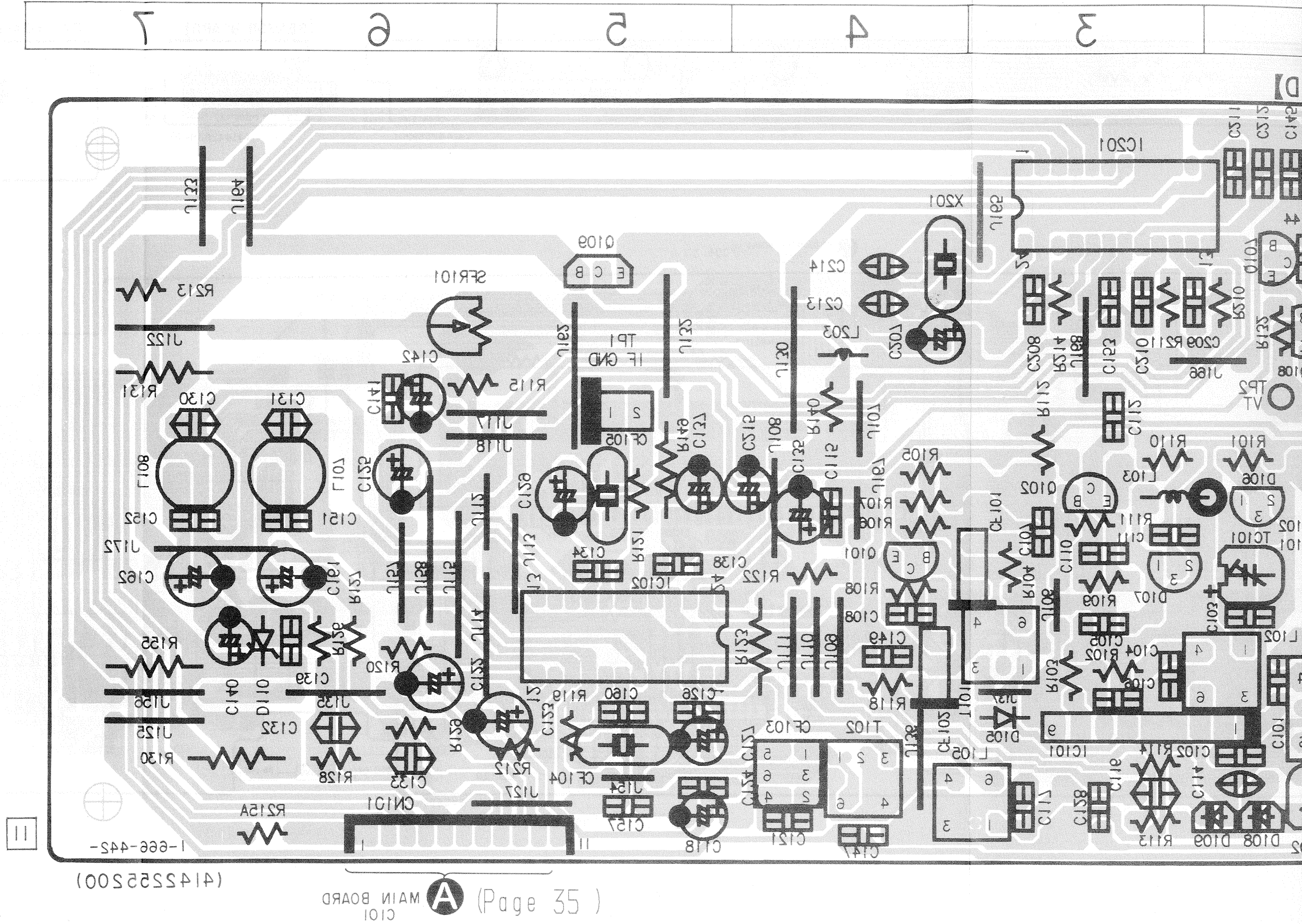
Note:
- ○—— : parts extracted from the component side.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

5-12. PRINTED WIRING BOARD — TUNER SECTION — (E, AR, MX models)
• See page 14 for Circuit Boards Location.

(Conductor Side) Note : Conductor side equal an inversion of component side.

- **Semiconductor Location**

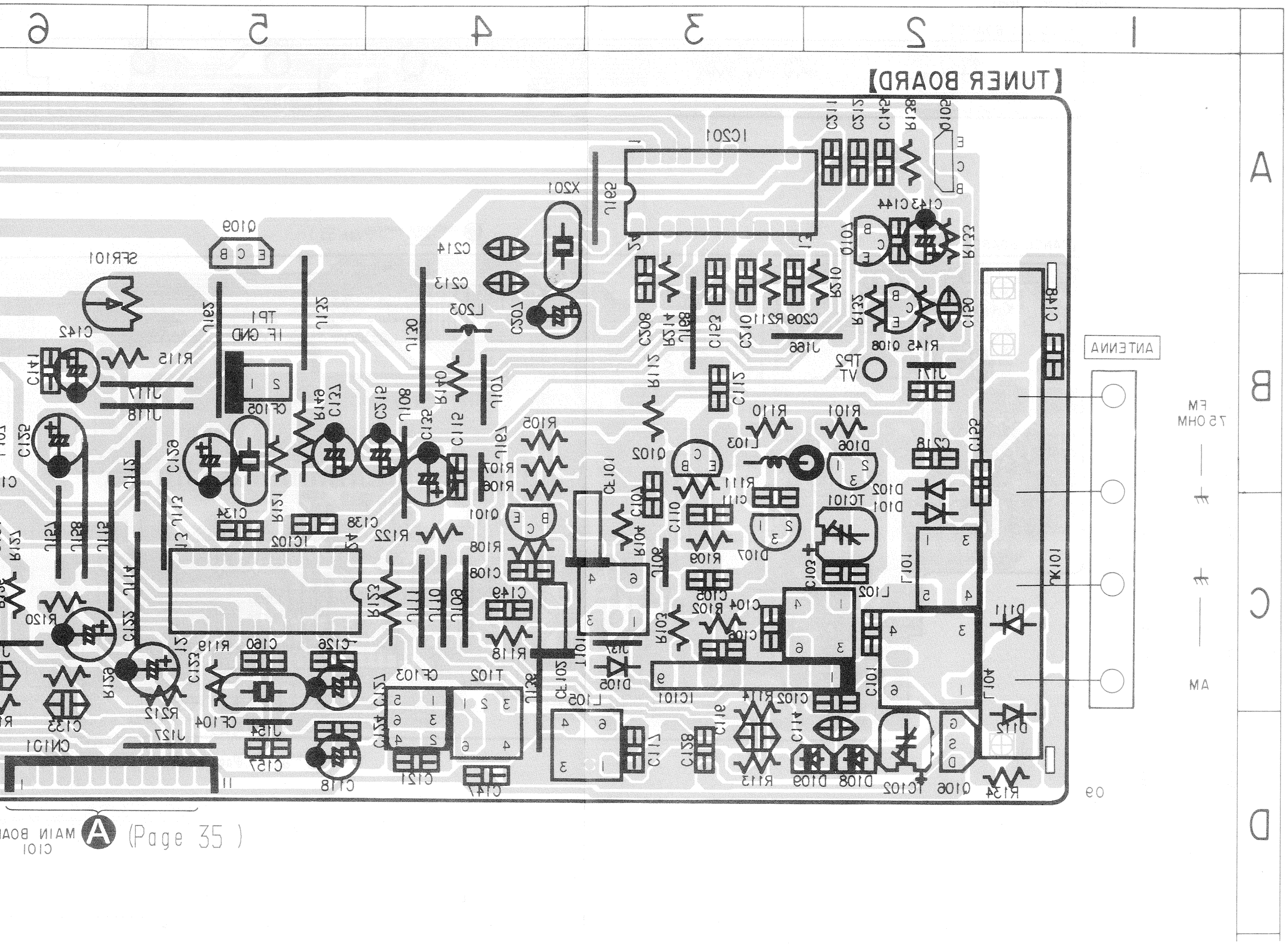
Ref. No.	Location
D101	C-2
D102	B-2
D105	C-3
D106	B-2
D107	C-3
D108	D-2
D109	D-2
D110	C-6
D111	C-2
D112	D-2
IC101	C-3
IC102	C-5
IC201	A-3
Q101	C-4
Q102	B-3
Q105	A-2
Q106	D-2
Q107	A-2
Q108	B-2
Q109	A-5


7
6
5
4
3
D
11
1-666-442-11
(4142255200)
MAIN BOARD CN101
A
(Page 35)
IC201
XS201
CN101
TP1 IF GND
TP2 TV

Note:
- o—— : parts extracted from the component side.
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

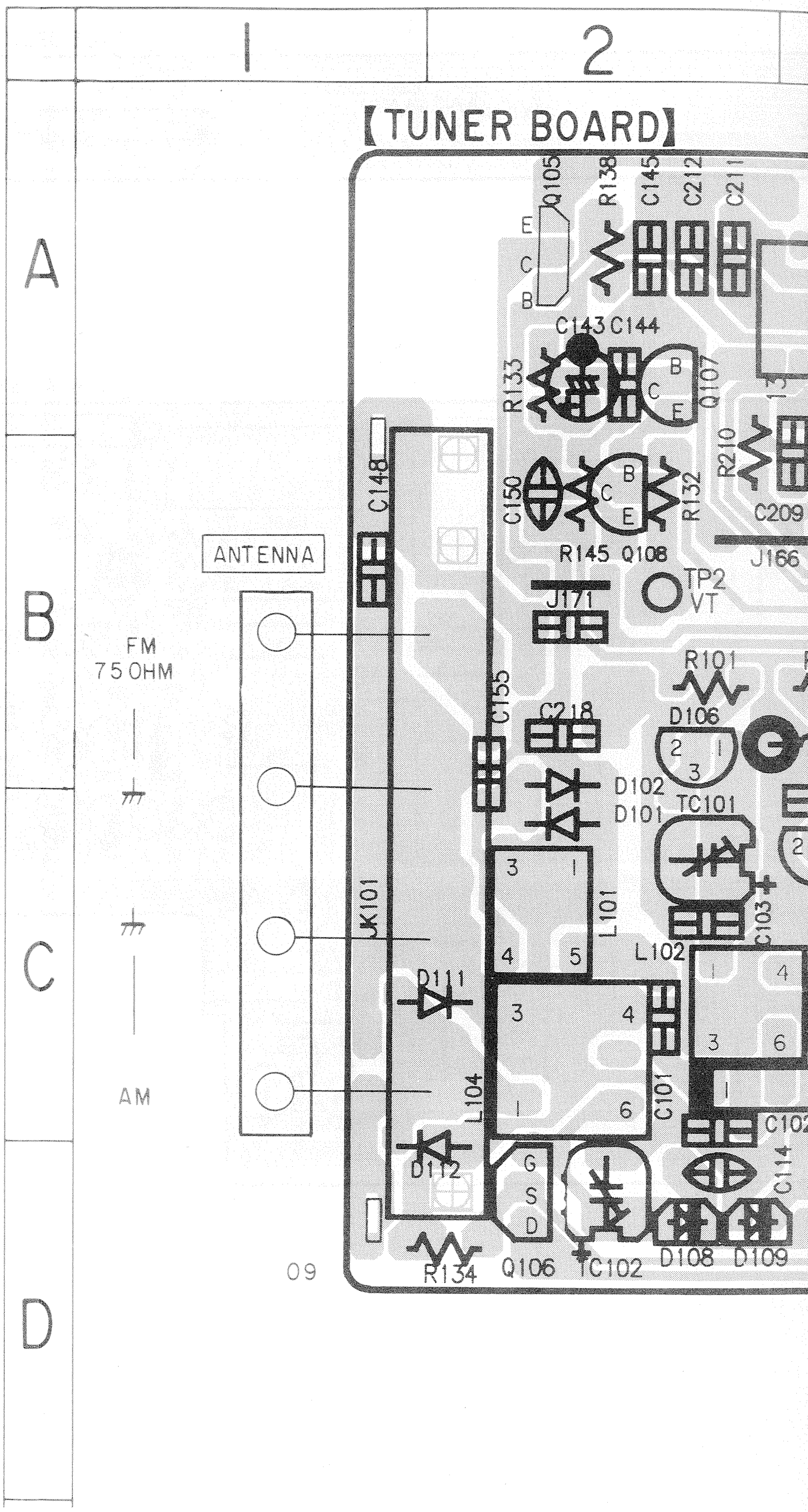
ING BOARD — TUNER SECTION — (E, AR, MX models)
for Circuit Boards Location.

ote : Conductor side equal an inversion of component side.



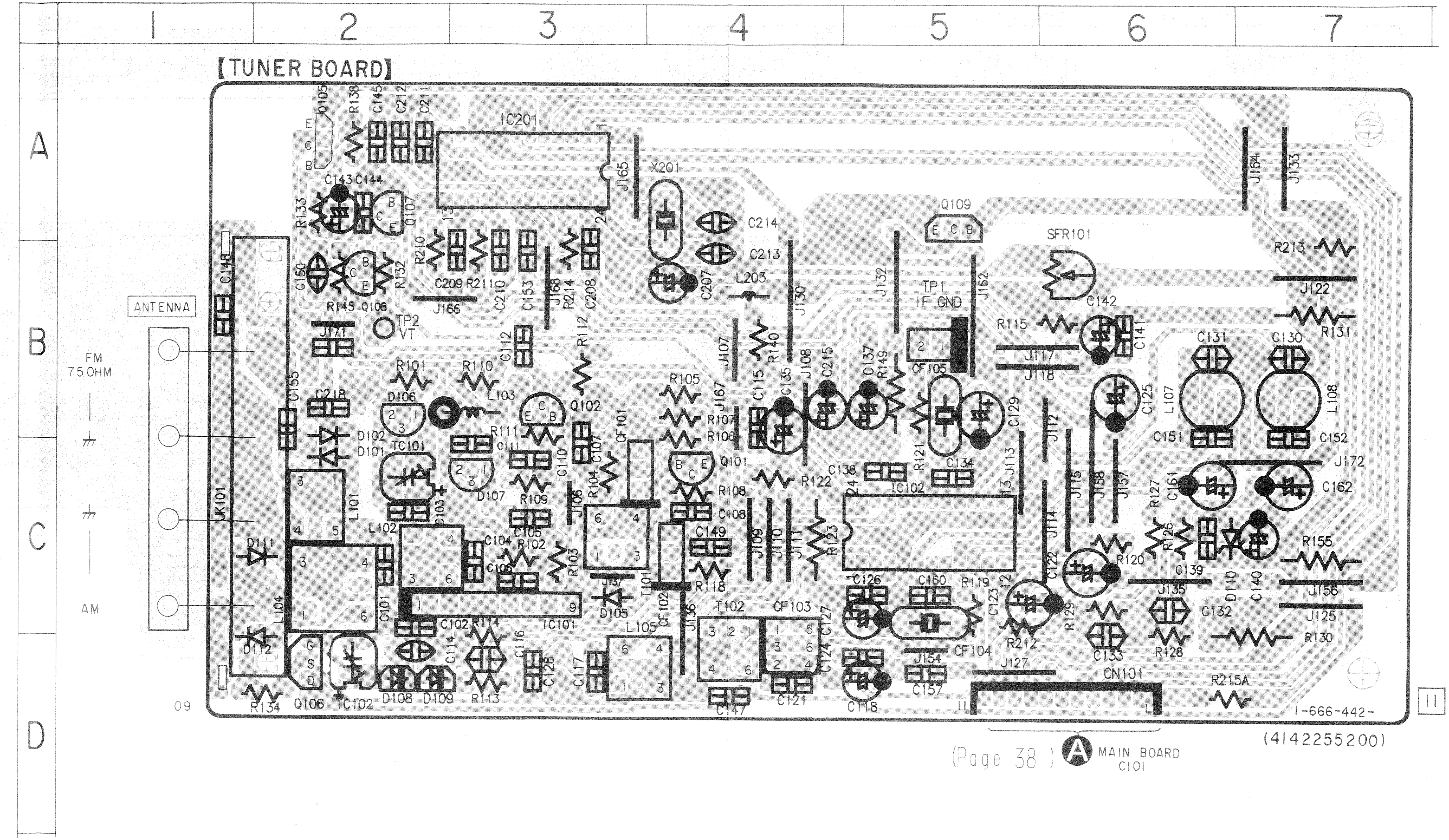
6
5
4
3
2
1
A
B
C
D
TUNER BOARD
ANTENNA
FM 75 OHM
AM
TP1 IF GND
TP2 TV
IC201
IC102
IC101
XS01
SFR101
K101
MAIN BOARD CN101
A (Page 35)

(Component Side)



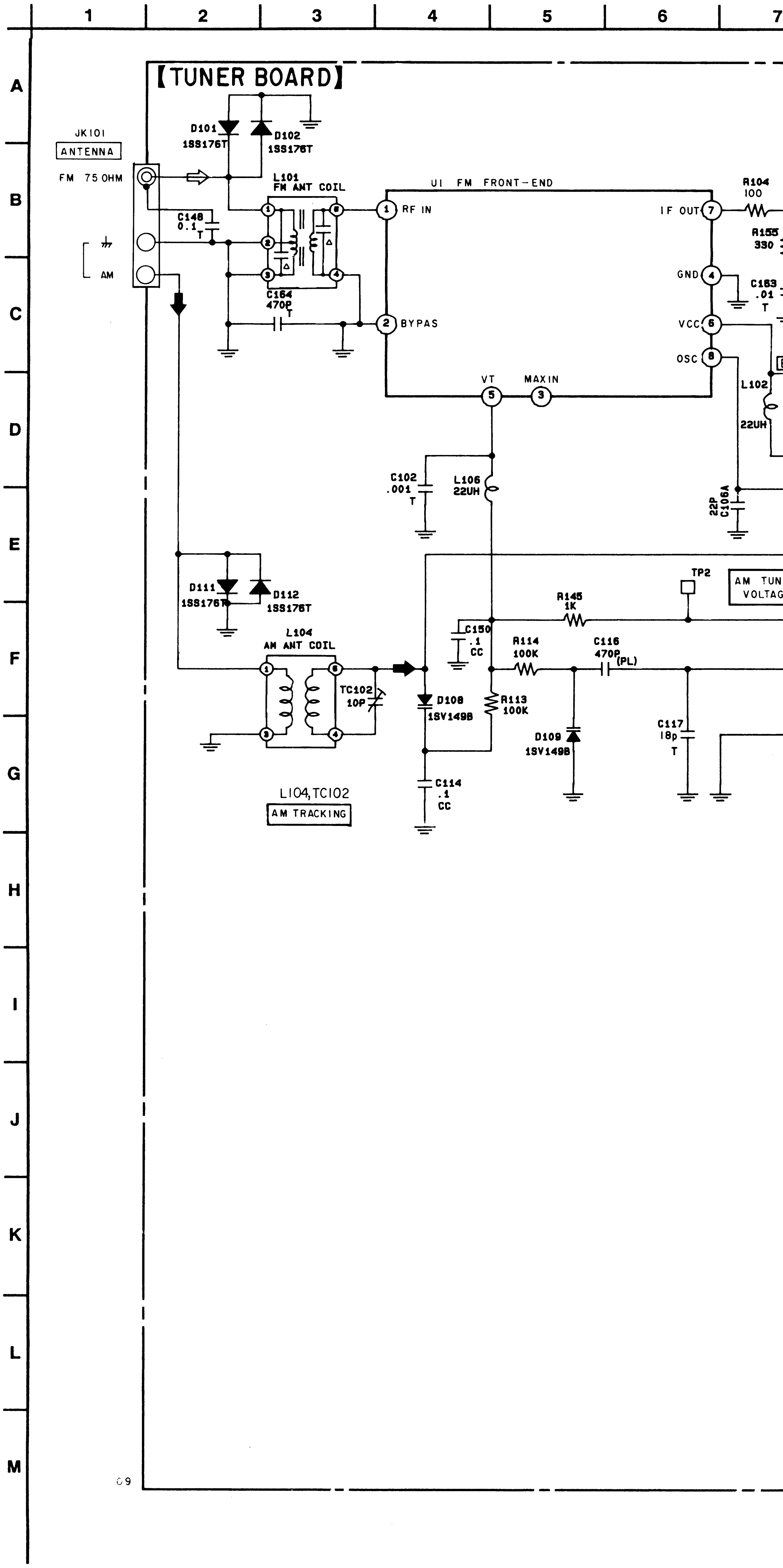
1
2
A
B
C
D
TUNER BOARD
ANTENNA
FM 75 OHM
AM
TP2 VT
K101
L101
L102
L104
D111
D112
R134
Q106
TC102
D108
D109
R145
Q108
J171
R101
D106
D102
D101
TC101
C103
C101
C114
C102
C148
C150
C155
C218
C209
J166
R133
Q107
R132
R210
C143
C144
Q105
R138
C145
C212
C211
09

(Component Side)


1
2
3
4
5
6
7
A
B
C
D
【TUNER BOARD】
ANTENNA
FM
75 OHM
AM
JK101
IC201
IC101
IC102
X201
Q101
Q102
Q105
Q106
Q107
Q108
Q109
SFR101
TP1
IF GND
TP2
VT
CF101
CF102
CF103
CF104
CF105
T101
T102
TC101
TC102
L101
L102
L103
L104
L105
L107
L108
L203
D101
D102
D105
D106
D107
D108
D109
D110
D111
D112
CN101
R101
R102
R103
R104
R105
R106
R107
R108
R109
R110
R111
R112
R113
R114
R115
R118
R119
R120
R121
R122
R123
R126
R127
R128
R129
R130
R131
R132
R133
R134
R138
R140
R145
R149
R155
R210
R211
R212
R213
R214
R215A
C101
C102
C103
C104
C105
C106
C107
C108
C110
C111
C112
C114
C115
C116
C117
C118
C121
C122
C123
C124
C125
C126
C127
C128
C129
C130
C131
C132
C133
C134
C135
C137
C138
C139
C140
C141
C142
C143
C144
C145
C147
C148
C149
C150
C151
C152
C153
C155
C157
C160
C161
C162
C207
C208
C209
C210
C211
C212
C213
C214
C215
C218
J107
J108
J109
J110
J111
J112
J113
J114
J115
J117
J118
J122
J125
J127
J130
J132
J133
J135
J136
J137
J154
J156
J157
J158
J162
J164
J165
J166
J167
J168
J171
J172
09
1-666-442-
11
(4142255200)
(Page 38)
A MAIN BOARD CI01

5-14. SCHEMATIC DIAGRAM — TUNER SECTION — (AEP, UK models)

- **See page 31 for IC Block Diagrams.**
- **See page 78 for Waveforms.**

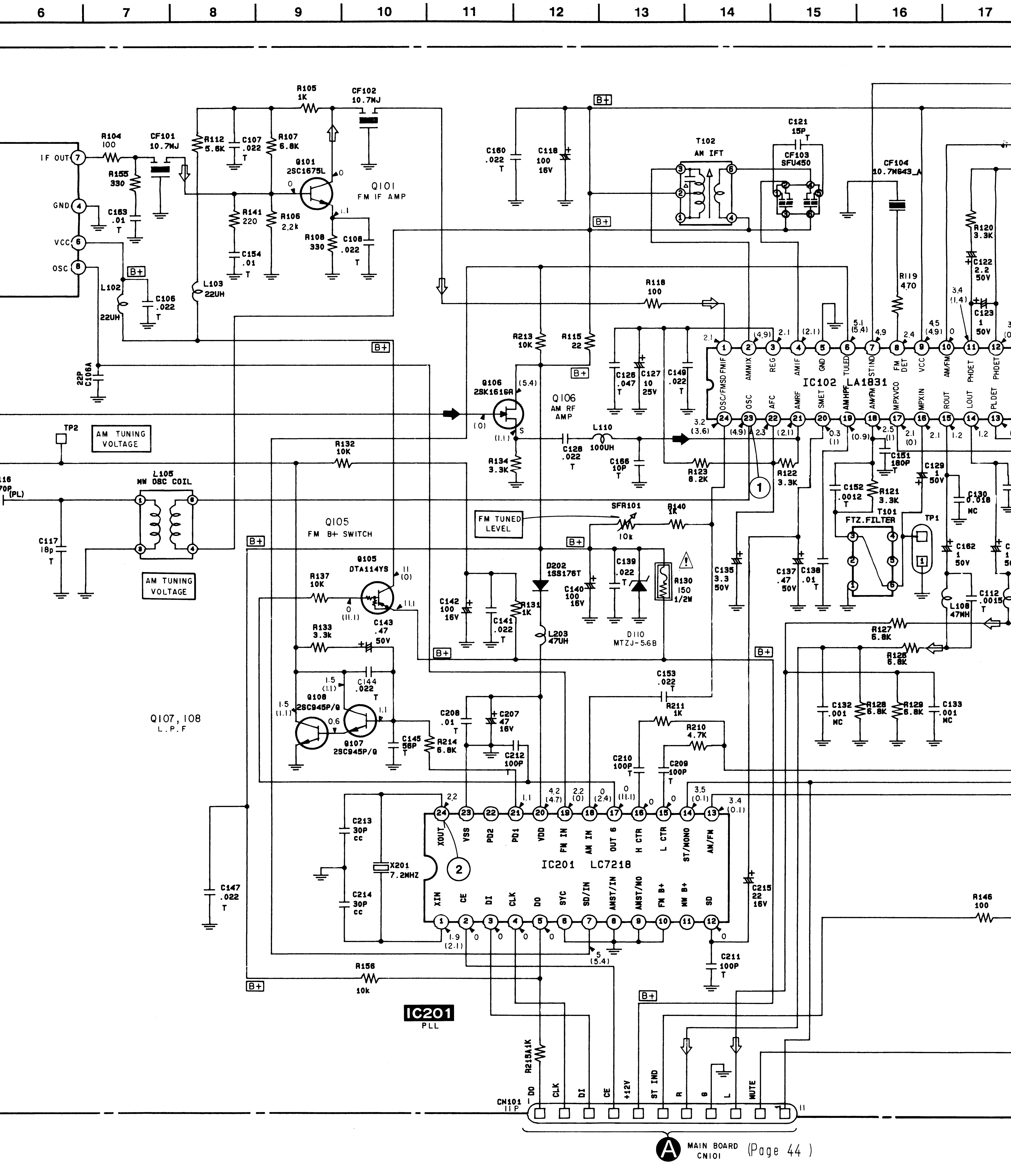

1
2
3
4
5
6
7
A
B
C
D
E
F
G
H
I
J
K
L
M
【TUNER BOARD】
JK101
ANTENNA
FM 75 OHM
AM
D101
1SS176T
D102
1SS176T
L101
FM ANT COIL
C148
0.1
T
C164
470P
T
U1 FM FRONT-END
RF IN
BYPAS
IF OUT
GND
VCC
OSC
VT
MAXIN
R104
100
R155
330
C153
.01
T
L102
22UH
C102
.001
T
L106
22UH
22P
C106A
D111
1SS176T
D112
1SS176T
L104
AM ANT COIL
TC102
10P
L104,TC102
AM TRACKING
C150
.1
CC
R145
1K
TP2
AM TUN
VOLTAG
R114
100K
C116
470P
(PL)
D108
1SV149B
R113
100K
D109
1SV149B
C117
18p
T
C114
.1
CC

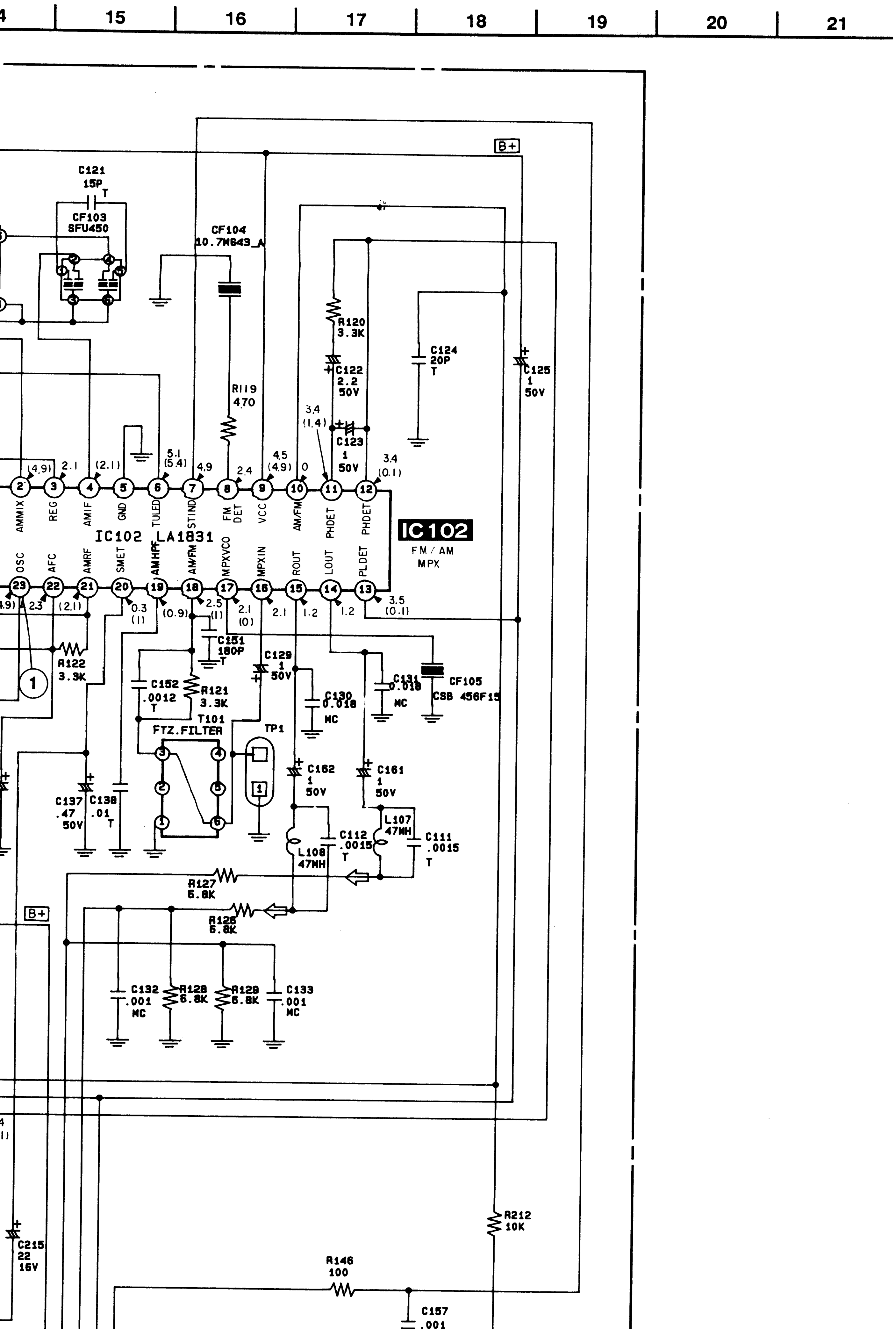
Note:

- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- ⊡ : nonflammable resistor.
- ☐: panel designation.

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

- B+ : B+ Line
- ☐: adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  ( ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM

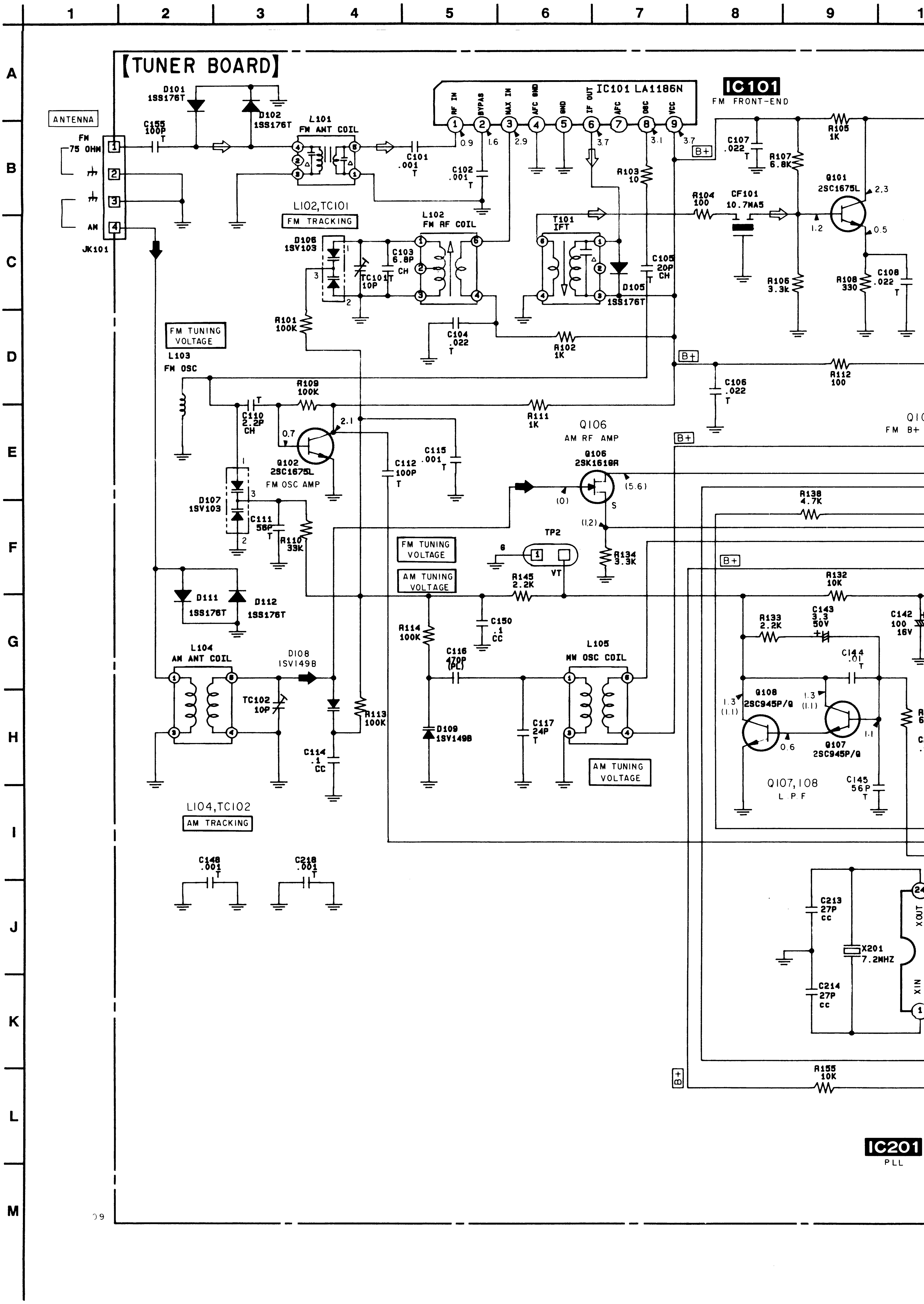

6
7
8
9
10
11
12
13
14
15
16
17
IF OUT 7
GND 4
VCC 6
OSC 8
R104 100
CF101 10.7MJ
R155 330
C163 .01 T
L102 22UH
C106 .022 T
22P C106A
R112 5.6K
C107 .022 T
R107 6.8K
R105 1K
CF102 10.7MJ
Q101 2SC1675L
Q101 FM IF AMP
R141 220
R106 2.2k
R108 330
C108 .022 T
C154 .01 T
L103 22UH
C160 .022 T
C118 100 16V
B+
T102 AM IFT
C121 15P T
CF103 SFU450
CF104 10.7MS43_A
R118 100
R119 470
R120 3.3K
C122 2.2 50V
C123 1 50V
R213 10K
R115 22
Q106 2SK1616R
Q106 AM RF AMP
C126 .047 T
C127 10 25V
C149 .022 T
IC102 LA1831
OSC/FMSD FMIF
AMMIX
REG
AMIF
GND
TULED
STIND
FM DET
VCC
AM/FM
PHDET
OSC
AFC
AMRF
SMET
AMHPF
AM/FM
MPXVCO
MPXIN
ROUT
LOUT
PLDET
TP2
AM TUNING VOLTAGE
R132 10K
R134 3.3K
C128 .022 T
L110 100UH
C166 10P T
R123 8.2K
R122 3.3K
C152 .0012 T
R121 3.3K
C151 180P
C129 1 50V
C130 0.018 MC
T101 FTZ.FILTER
TP1
C162 1 50V
C112 .0015 T
L108 47MH
L105 MW OSC COIL
C117 18p T
AM TUNING VOLTAGE
Q105 FM B+ SWITCH
Q105 DTA114YS
FM TUNED LEVEL
SFR101 10k
R140 1K
D202 1SS176T
C139 .022 T
C140 100 16V
R130 150 1/2W
D110 MTZJ-5.6B
C135 3.3 50V
C137 .47 50V
C138 .01 T
R137 10K
R133 3.3k
C143 .47 50V
C142 100 16V
C141 .022 T
R131 1K
L203 47UH
R127 6.8K
R125 6.8K
C132 .001 MC
R128 6.8K
R129 6.8K
C133 .001 MC
Q107, 108 L.P.F
Q108 2SC945P/Q
Q107 2SC945P/Q
C144 .022 T
C145 56P T
R214 6.8K
C208 .01 T
C207 47 16V
C212 100P T
C153 .022 T
R211 1K
R210 4.7K
C210 100P T
C209 100P T
C213 30P CC
X201 7.2MHZ
C214 30P CC
IC201 LC7218
XOUT
VSS
PD2
PD1
VDD
FM IN
AM IN
OUT 6
H CTR
L CTR
ST/MONO
AM/FM
XIN
CE
DI
CLK
DO
SYC
SD/IN
AMST/IN
AMST/NO
FM B+
MW B+
SD
C215 22 16V
C147 .022 T
R156 10k
C211 100P T
R146 100
IC201 PLL
R215A 1K
CN101 11P
DO
CLK
DI
CE
+12V
ST IND
R
G
L
MUTE
A MAIN BOARD CN101 (Page 44)


15
16
17
18
19
20
21
B+
C121
15P
T
CF103
SFU450
CF104
10.7M643_A
R120
3.3K
C122
2.2
50V
C123
1
50V
C124
20P
T
C125
1
50V
R119
470
3.4
(1.4)
3.4
(0.1)
(4.9)
2.1
(2.1)
5.1
(5.4)
4.9
2.4
4.5
(4.9)
0
AMMIX
REG
AMIF
GND
TULED
STIND
FM DET
VCC
AM/FM
PHDET
PHDET
IC102
FM / AM
MPX
IC102 LA1831
OSC
AFC
AMRF
SMET
AMHPF
AMFM
MPXVCO
MPXIN
ROUT
LOUT
PLDET
2.3
(2.1)
0.3
(1)
(0.9)
2.5
(1)
2.1
(0)
2.1
1.2
1.2
3.5
(0.1)
C151
180P
T
C129
1
50V
C130
0.018
MC
C131
0.018
MC
CF105
CSB 456F15
R122
3.3K
1
C152
.0012
T
R121
3.3K
T101
FTZ.FILTER
TP1
C162
1
50V
C161
1
50V
C137
.47
50V
C138
.01
T
C112
.0015
T
L108
47MH
L107
47MH
C111
.0015
T
R127
6.8K
R126
6.8K
B+
C132
.001
MC
R128
6.8K
R129
6.8K
C133
.001
MC
R212
10K
C215
22
16V
R146
100
C157
.001
T
MUTE
11

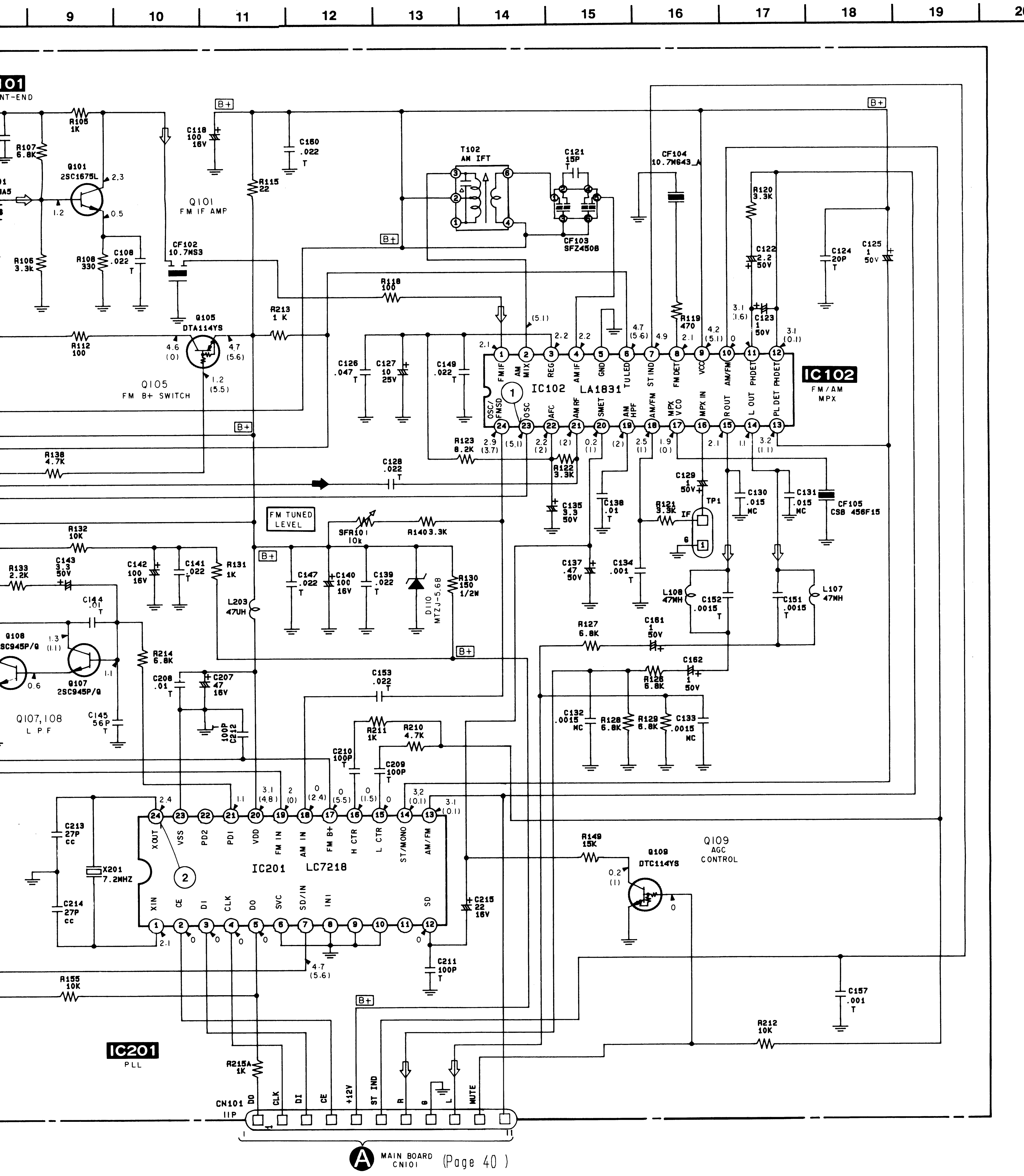
(Page 44)

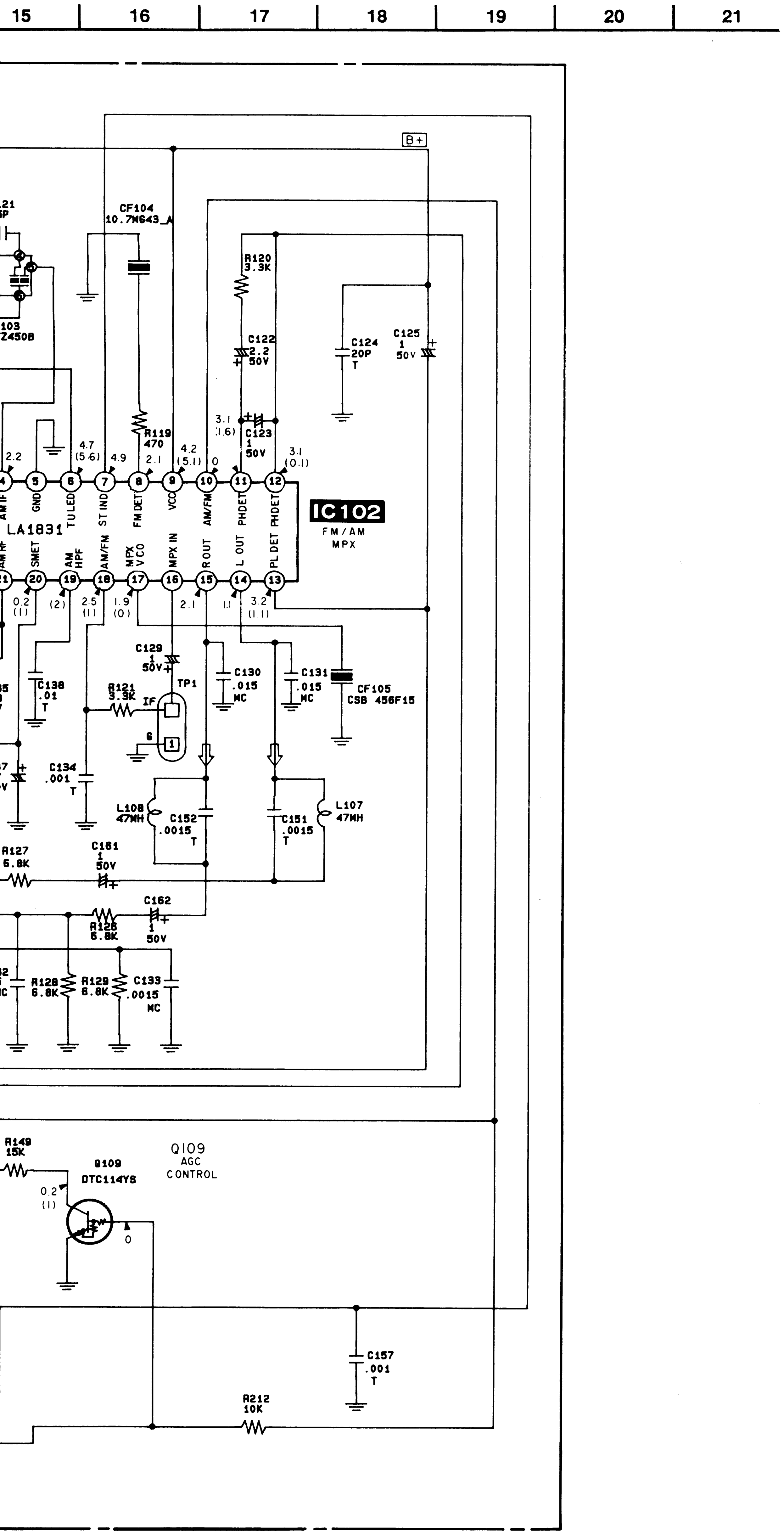
5-13. SCHEMATIC DIAGRAM — TUNER SECTION — (E, AR, MX models)

• See page 31 for IC Block Diagrams.

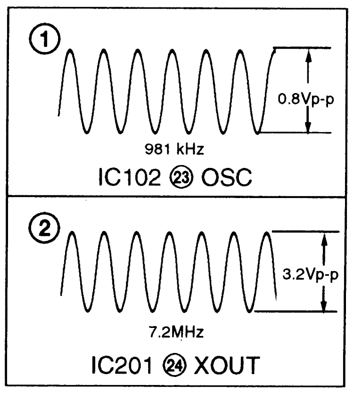


1
2
3
4
5
6
7
8
9
A
B
C
D
E
F
G
H
I
J
K
L
M
[TUNER BOARD]
ANTENNA
FM
75 OHM
AM
JK101
D101
1SS176T
D102
1SS176T
C155
100P
T
L101
FM ANT COIL
C101
.001
T
C102
.001
T
IC101 LA1186N
IC101
FM FRONT-END
RF IN
BYPAS
MIX IN
AFC GND
GND
IF OUT
AFC
OSC
VCC
0.9
1.6
2.9
3.7
3.1
3.7
B+
C107
.022
T
R107
6.8K
R105
1K
R103
10
R104
100
CF101
10.7MA5
Q101
2SC1675L
2.3
1.2
0.5
L102,TC101
FM TRACKING
D106
1SV103
TC101
10P
C103
6.8P
CH
L102
FM RF COIL
T101
IFT
C105
20P
CH
D105
1SS176T
R106
3.3k
R108
330
C108
.022
T
R101
100K
C104
.022
T
R102
1K
FM TUNING VOLTAGE
L103
FM OSC
R109
100K
C110
2.2P
CH
0.7
2.1
Q102
2SC1675L
FM OSC AMP
C106
.022
T
R112
100
R111
1K
Q106
AM RF AMP
Q106
2SK161GR
FM B+
C115
.001
T
C112
100P
T
(0)
(5.6)
(1.2)
S
D107
1SV103
C111
56P
T
R110
33K
R138
4.7K
TP2
6
VT
R134
3.3K
FM TUNING VOLTAGE
AM TUNING VOLTAGE
R145
2.2K
R132
10K
D111
1SS176T
D112
1SS176T
R114
100K
C150
.1
CC
C143
3.3
50V
C142
100
16V
R133
2.2K
L104
AM ANT COIL
D108
1SV149B
C116
470P
(PL)
L105
MW OSC COIL
C144
.01
T
TC102
10P
R113
100K
Q108
2SC945P/Q
1.3
(1.1)
1.3
(1.1)
D109
1SV149B
C117
24P
T
0.6
1.1
Q107
2SC945P/Q
C114
.1
CC
AM TUNING VOLTAGE
Q107,108
L.P.F
C145
56P
T
L104,TC102
AM TRACKING
C148
.001
T
C218
.001
T
C213
27P
CC
X201
7.2MHZ
XOUT
XIN
C214
27P
CC
R155
10K
IC201
PLL


9
10
11
12
13
14
15
16
17
18
19
FRONT-END
Q101 2SC1675L
Q101 FM IF AMP
CF102 10.7MS3
Q105 DTA114YS
Q105 FM B+ SWITCH
T102 AM IFT
C121 15P
CF103 SFZ450B
CF104 10.7MG43_A
IC102 LA1831
IC102
FM/AM MPX
FMIF
AM MIX
REG
AM IF
GND
TULED
ST IND
FM DET
VCC
AM/FM
PHDET
PL DET
OSC/FMSD
OSC
AFC
AM RF
SMET
AM HPF
AM/FM
MPX VCO
MPX IN
R OUT
L OUT
CF105 CSB 456F15
TP1
IF
FM TUNED LEVEL
SFR101 10k
R140 3.3K
D110 MTZJ-5.6B
R130 150 1/2W
L203 47UH
L108 47MH
L107 47MH
Q107,108 L P F
Q107 2SC945P/Q
Q108 2SC945P/Q
IC201 LC7218
IC201
PLL
XOUT
VSS
PD2
PD1
VDD
FM IN
AM IN
FM B+
H CTR
L CTR
ST/MONO
AM/FM
XIN
CE
DI
CLK
DO
SVC
SD/IN
INI
SD
X201 7.2MHZ
Q109 DTC114YS
Q109 AGC CONTROL
R149 15K
R212 10K
C157 .001 T
R155 10K
R215A 1K
CN101 11P
DO
CLK
DI
CE
+12V
ST IND
R
G
L
MUTE
B+
A
MAIN BOARD CN101
(Page 40)


15
16
17
18
19
20
21
B+
CF104
10.7MG43_A
R120
3.3K
C122
2.2
50V
C124
20P
T
C125
1
50V
R119
470
C123
1
50V
103
Z4508
4.7
(5.6)
4.9
2.1
4.2
(5.1)
0
3.1
(1.6)
3.1
(0.1)
2.2
AM IF
GND
TU LED
ST IND
FM DET
VCC
AM/FM
PHDET
PL DET PHDET
LA1831
IC102
FM/AM
MPX
SMET
AM HPF
AM/FM
MPX VCO
MPX IN
R OUT
L OUT
0.2
(1)
(2)
2.5
(1)
1.9
(0)
2.1
1.1
3.2
(1.1)
C129
1
50V
C130
.015
MC
C131
.015
MC
CF105
CSB 456F15
C138
.01
T
R121
3.3K
IF
TP1
C134
.001
T
L108
47MH
C152
.0015
T
C151
.0015
T
L107
47MH
R127
6.8K
C161
1
50V
C162
1
50V
R126
6.8K
R128
6.8K
R129
6.8K
C133
.0015
MC
R149
15K
Q109
DTC114YS
Q109
AGC
CONTROL
0.2
(1)
0
C157
.001
T
R212
10K

• Waveforms

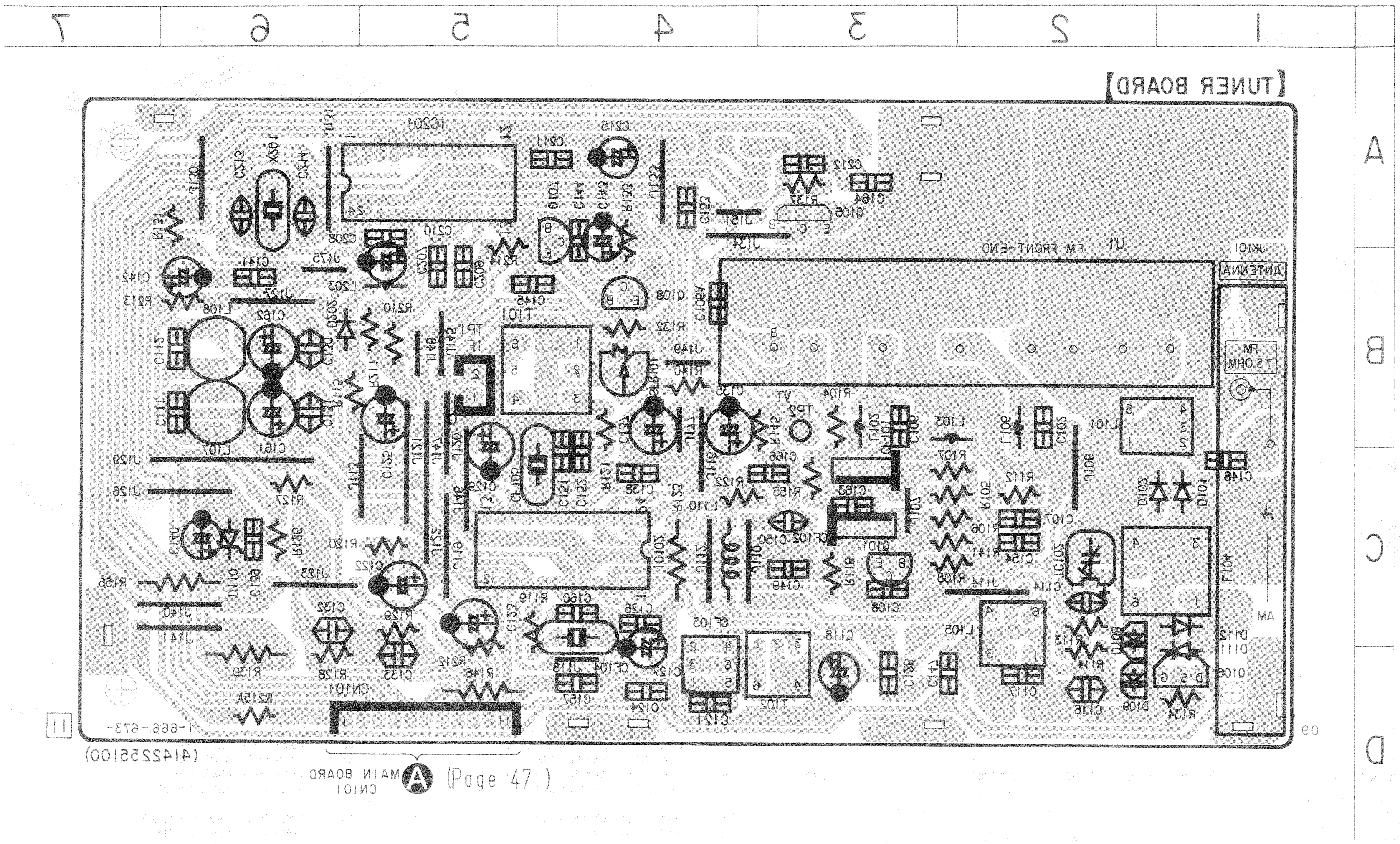


Note:

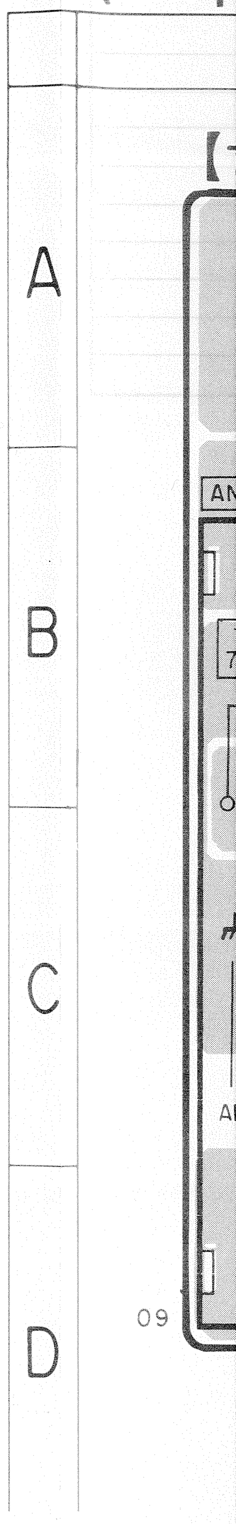
- All capacitors are in μF unless otherwise noted. pF:μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- .XXX is an abbreviation of 0. XXX.
- : nonflammable resistor.
- ☐ : panel designation.
- B+ : B+ Line
- ☐ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal (deturned) conditions.
  no mark : FM
  (   ) : AM
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope. Voltage variations may be noted due to normal production tolerances.
- Circled numbers refer to waveforms.
- Signal path.
  ⇨ : FM
  ➡ : AM
- Abbreviation
  AR : Argentine model.
  MX : Mexican model.

5-15. **PRINTED WIRING BOARD — TUNER SECTION — (AEP, UK models)**
• See page 14 for Circuit Boards Location.

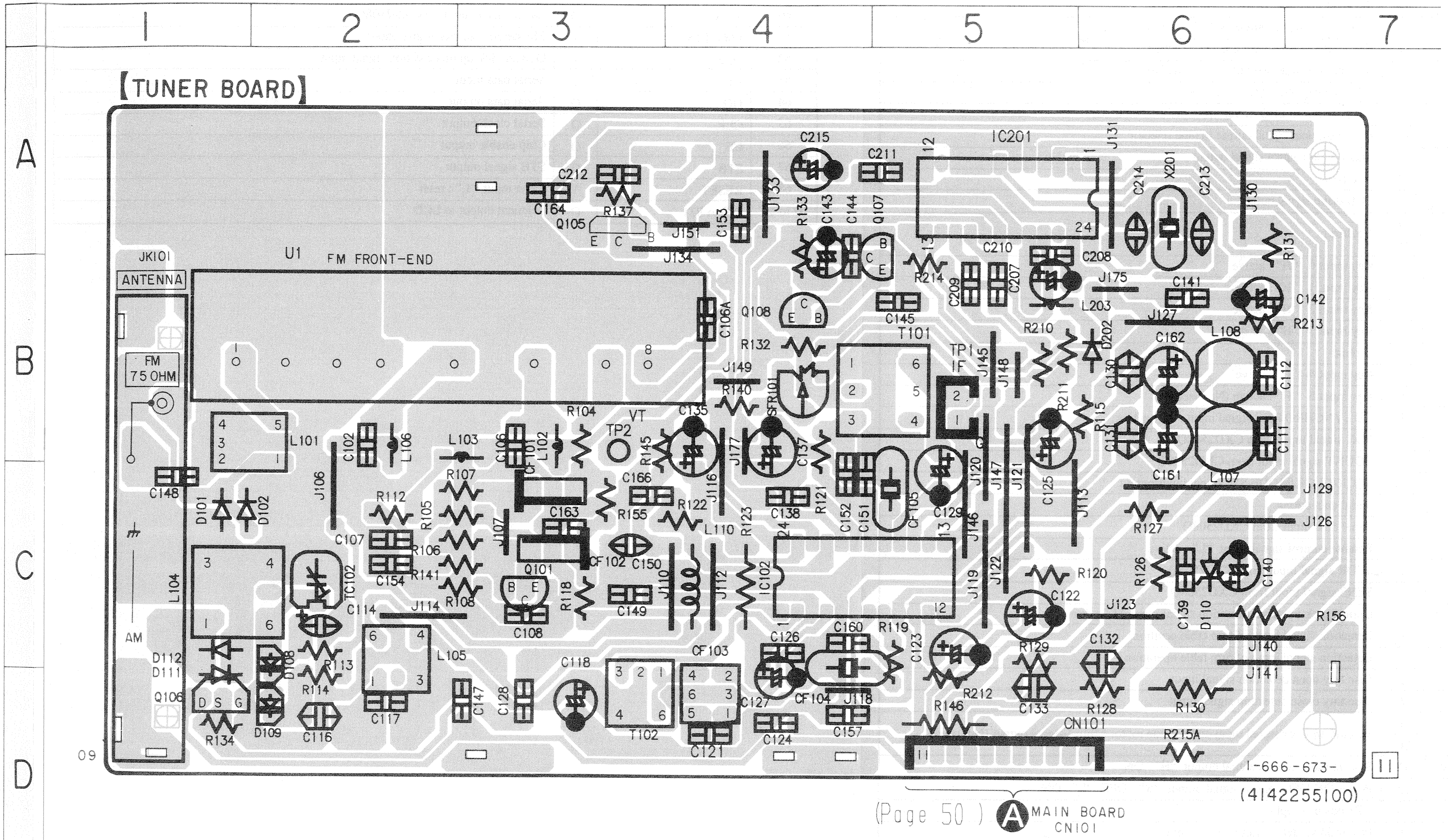
(Conductor Side) Note : Conductor side equal an inversion of component side.


7
6
5
4
3
2
1
A
B
C
D
[TUNER BOARD]
FM FRONT-END U1
ANTENNA
FM 75 OHM
AM
IC201
IC101
IC102
T101
T102
TP1 IF
TP2 TV
1-666-673-
(41422551 00)
MAIN BOARD CN101
A
(Page 47)

(Comp



(Component Side)


1
2
3
4
5
6
7
A
B
C
D
【TUNER BOARD】
JK101
ANTENNA
U1 FM FRONT-END
FM 75 OHM
AM
IC201
IC102
T101
T102
TP1 IF
TP2 VT
CN101
Q101
Q105
Q106
Q107
Q108
D101
D102
D108
D109
D110
D111
D112
D202
X201
CF101
CF102
CF103
CF104
CF105
L101
L102
L103
L104
L105
L106
L107
L108
L110
L203
TC102
SFR101
1-666-673-
11
(4142255100)
(Page 50)
A MAIN BOARD CN101

- **Semiconductor Location**

Ref. No.	Location
D101	C-1
D102	C-2
D108	D-2
D109	D-2
D110	C-6
D111	D-1
D112	C-1
D202	B-6
IC102	C-4
IC201	A-5
Q101	C-3
Q105	A-3
Q106	D-1
Q107	A-5
Q108	B-4

Note:

- ○—— : parts extracted from the component side.

5-16. IC PIN FUNCTION

• IC601 System Controller, LCD driver (μPD753017AGC)

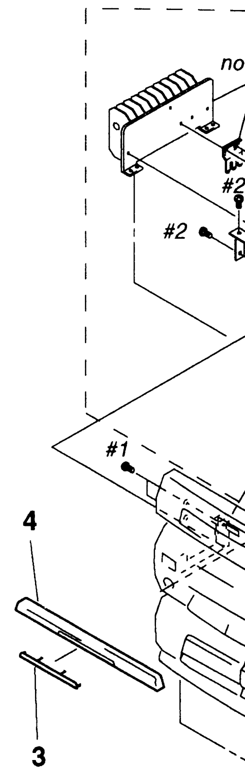
Pin No.	Pin Name	I/O	Function
1 to 12	S12 to S23	O	Segment output to LCD.
13	KO A	O	Key control signal output A "H" : active
14	KO B	O	Key control signal output B "H" : active
15	KO C	O	Key control signal output C "H" : active
16	TUNED	I	Turned detection signal from tuner
17	LATCH OUT	O	Latch output to LED driver "H" : active (Not used)
18	TAPE REC OUT	O	REC/PB select signal output to tape selector
19	TU MUTE OUT	O	Tuner mute control signal output
20	—	—	Not used
21 to 24	COM 1 to COM 3	O	LCD drive signal output
25	BIAS	O	Not used
26 to 28	VLC 0 to VLC 2	O	
29	KI 0	I	Key input 0 " H" : active
30	KI 1	I	Key input 1 " H" : active
31	KI 2	I	Key input 2 " H" : active
32	KI 3	I	Key input 3 " H" : active
33	VSS	—	Ground
34	KI 4	I	Key input 4 " H": active
35	KI 5	I	Key input 5 " H" : active (Not used)
36	SYC. REC IN	I	CD SYNCHRO REC signal input "L" : active
37	FOK	I	FOK signal input from CXD2508Q
38	COUNT	I	COUNT signal input from CXD2508Q
39	SQCK/MODE SW IN	I/O	SQCK/CLOK/MODE SW signal input/output
40	DATA	O	Serial data output
41	SQSO	I	Serial data input from CXD2508Q
42	REM. IN	I	Remote control signal input "L" : active
43	SCOR	I	SCOR signal input from CXD2508Q
44	SENS	I	SENS signal input from CXD2508Q
45	GFS	I	Optical pick-up down detection signal input "L" : down
46	DISC COUNT SW	I	Detection signal input of turn table position
47	TURN TABLE SW	I	Detection signal input of turn table operation
48	TRAY OPEN SW	I	Disc tray open detection signal input
49	TRAY CLOSE SW	I	Disc tray close detection signal input
50	VR UP	I/O	Volume encoder signal input and volume motor control signal output (Not used)
51	VR DOWN	I/O	
52	SYSTEM MUTE OUT	O	System mute control signal output "H" : ON
53	POWER OUT	O	Power ON/OFF control signal output "H" : OFF, "L" : ON
54	VDD	—	+5V power supply
55	POWER DOWN IN	I	Power down detect input "L" : active
56	OPEN	—	Not used
57	VDD	—	+5V power supply
58	X1	—	System clock (4.19 MHz)
59	X2	—	
60	XLAT	O	Latch signal output to CXD2508Q
61	FM ST IN	I	FM stereo detection signal input
62	DI 2	I	Optical pick-up up detection signal input
63	DI 1	I	Serial data input
64	DO	O	Serial data output
65	CLK	O	Serial clock output
66	CE	O	Chip enable output
67	STB	O	STB signal output
68	RESET	I	Reset input "L" : reset
69 to 80	S00 to S11	O	Segment output to LCD

- Abbreviation
  LCD: Liquid Crystal Display

NOTE:

- Items marked "*" are no
  seldom required for rout
  should be anticipated wh
- The mechanical parts wit
  the exploded views are n

6-1. CASE AND BA



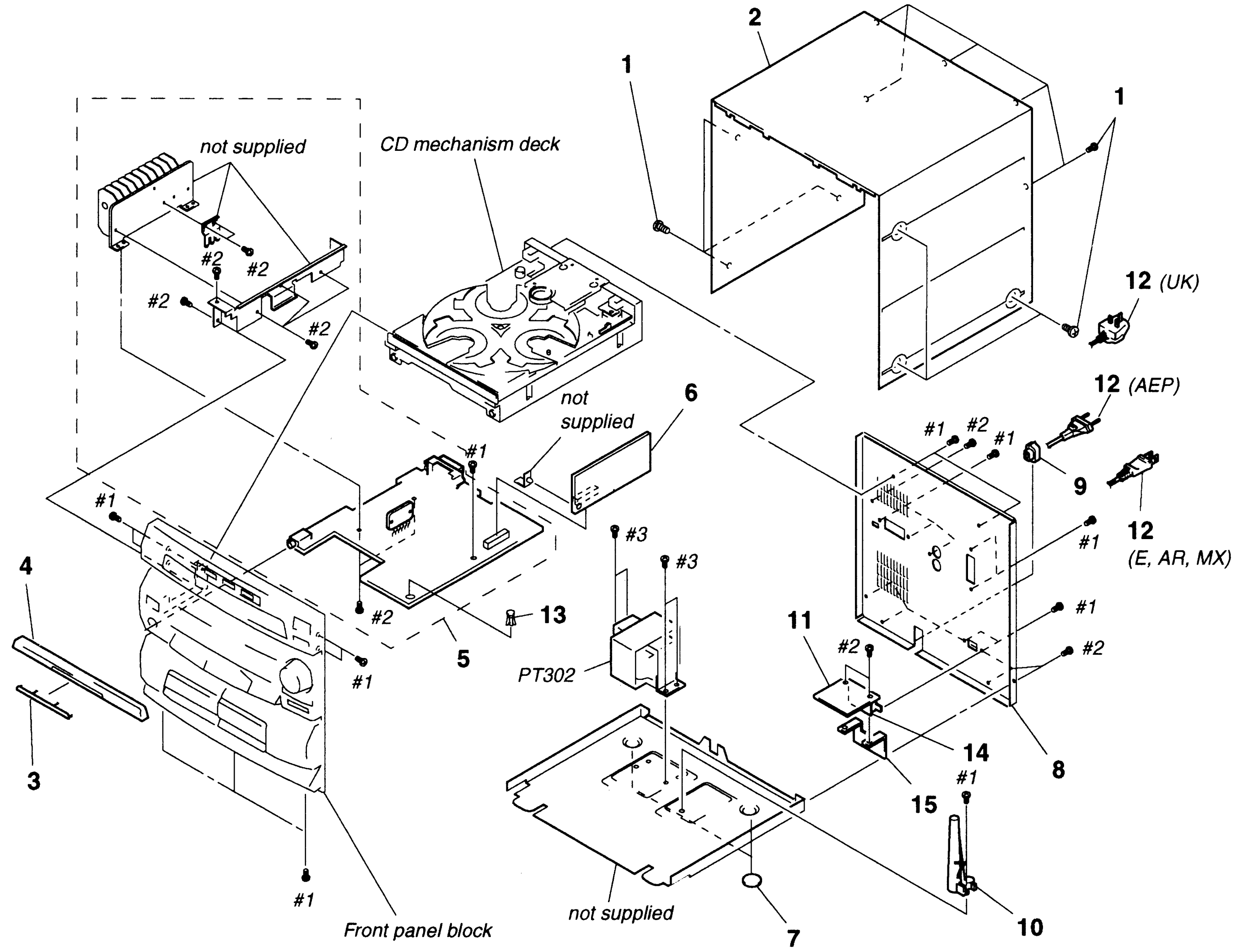
Ref. No.	Part No.
1	3-363-099-01
* 2	4-992-156-01
3	4-992-160-01
4	4-992-159-01
* 5	A-4398-915-A
* 5	A-4403-155-A
* 5	A-4403-222-A
* 6	A-4398-942-A
* 6	A-4403-154-A
7	4-992-154-01
* 8	4-992-155-01
* 8	4-993-075-01
* 8	4-993-737-01

SECTION 6
EXPLODED VIEWS

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  MX : Mexican model
  AR : Argentine model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

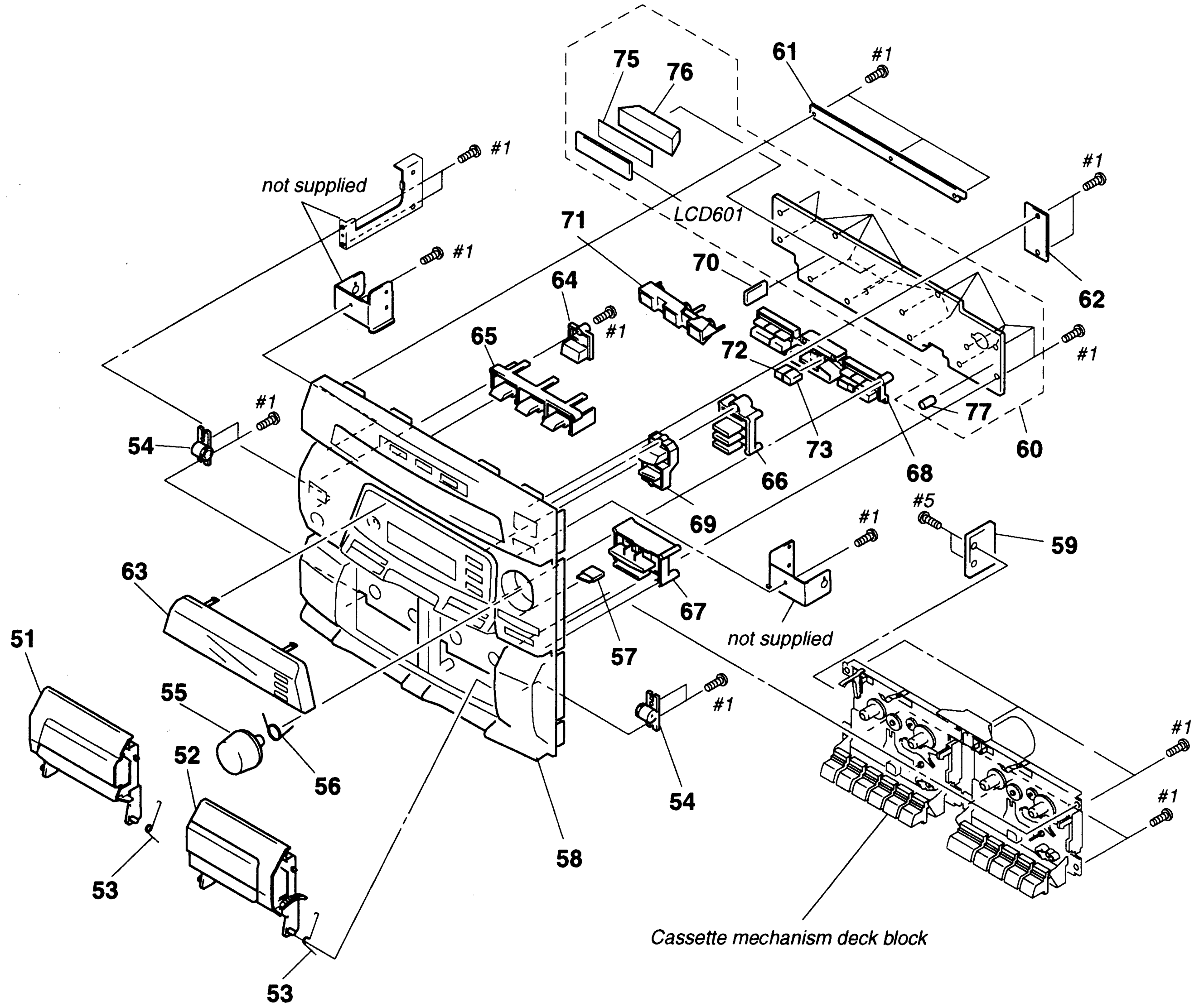
6-1. CASE AND BACK PANEL SECTION



2
1
1
not supplied
CD mechanism deck
#2
#2
#2
#2
12 (UK)
12 (AEP)
not supplied
6
#1
#2
#1
9
#1
4
#1
#3
#3
12
(E, AR, MX)
#1
#1
#2
5
13
11
#2
#1
#2
PT302
14
8
#1
15
3
#1
10
Front panel block
not supplied
7

Ref. No.	Part No.	Description	Remark
1	3-363-099-01	SCREW (CASE 3 TP2) (MX)	
* 2	4-992-156-01	CASE	
3	4-992-160-01	COVER, CD DOOR	
4	4-992-159-01	DOOR, CD	
* 5	A-4398-915-A	MAIN BOARD, COMPLETE (MX)	
* 5	A-4403-155-A	MAIN BOARD, COMPLETE (AEP,UK)	
* 5	A-4403-222-A	MAIN BOARD, COMPLETE (E,AR)	
* 6	A-4398-942-A	TUNER BOARD, COMPLETE (E,AR,MX)	
* 6	A-4403-154-A	TUNER BOARD, COMPLETE (AEP,UK)	
7	4-992-154-01	RUBBER, FOOT	
* 8	4-992-155-01	PANEL, BACK (MX)	
* 8	4-993-075-01	PANEL, BACK (AEP,UK)	
* 8	4-993-737-01	PANEL, BACK (E,AR)	
9	4-992-153-01	STOPPER (2271), CORD	
* 10	4-992-158-01	HOLDER, MAIN PC BOARD	
* 11	1-666-445-11	AC SUPPLY BOARD (E,AR,MX)	
* 11	1-666-674-11	AC POWER SUPPLY BOARD (AEP,UK)	
⚠12	1-551-506-XX	CORD, POWER (E,AR,MX)	
⚠12	1-696-572-21	CORD, POWER (UK)	
⚠12	1-765-558-11	CORD, POWER (AEP)	
13	3-531-576-11	RIVET	
* 14	1-666-452-11	VOL SELECT BOARD (E,AR)	
* 15	4-993-738-01	HOLDER, VOLTAGE SELECTION (SW) (E,AR)	
⚠PT302	1-431-461-11	TRANSFORMER, POWER (E,AR,MX)	
⚠PT302	1-431-462-11	TRANSFORMER, POWER (AEP,UK)	

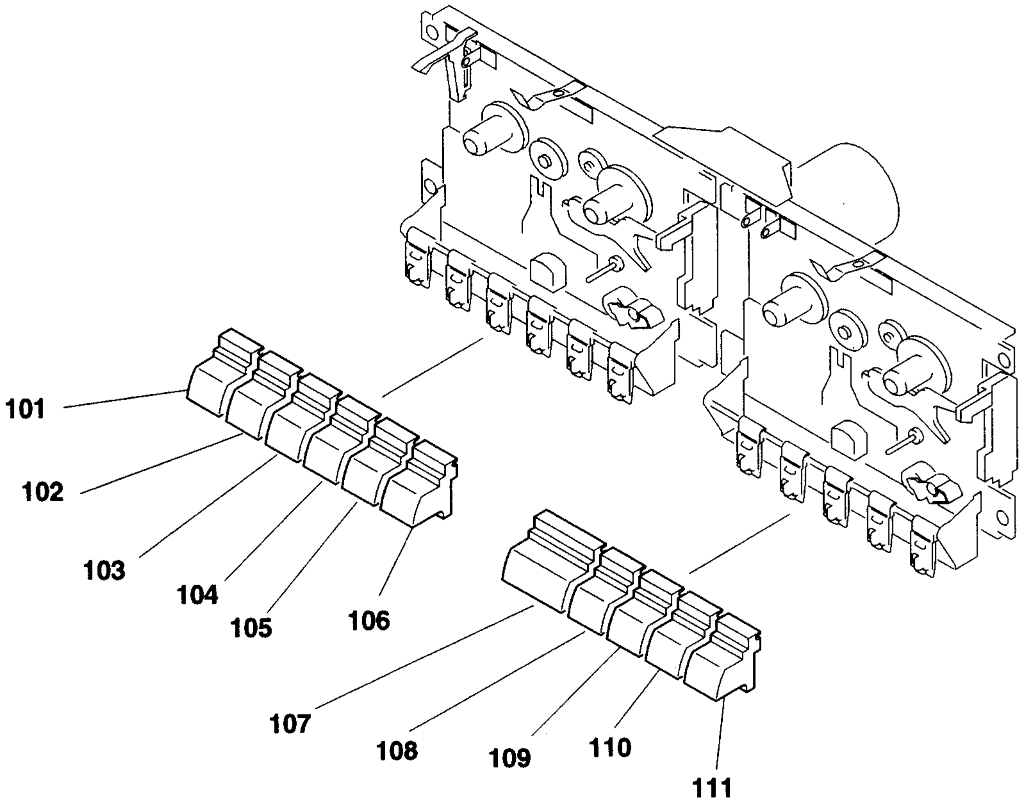
6-2. FRONT PANEL SECTION



75
76
61
#1
#1
not supplied
#1
LCD601
71
#1
70
64
#1
62
65
#1
72
#1
#1
77
54
73
60
66
68
#5
69
#1
59
63
67
not supplied
51
57
55
#1
#1
52
56
54
#1
58
53
Cassette mechanism deck block
53

Ref. No.	Part No.	Description	Remark
51	4-992-128-01	DOOR (L), CASSETTE	
52	4-992-129-01	DOOR (R), CASSETTE	
53	4-992-130-01	SPRING, DOOR	
54	4-992-131-01	DAMPER (GRY), GEAR	
55	4-992-125-01	KNOB, VOLUME	
56	4-992-126-01	SPRING, VOLUME	
57	4-992-127-01	LENS, LED	
58	4-992-124-01	PANEL, FRONT	
* 59	1-666-444-11	R/P SWITCH BOARD	
* 60	A-4398-918-A	PANEL BOARD, COMPLETE (MX)	
* 60	A-4403-221-A	PANEL BOARD, COMPLETE (E,AR)	
* 60	A-4403-354-A	PANEL BOARD, COMPLETE (AEP,UK)	
* 61	1-666-438-11	DISC LED BOARD	
* 62	1-666-439-11	O/C BOARD	
63	4-993-074-01	WINDOW, DISPLAY	
64	4-992-145-01	BUTTON, POWER	
65	4-992-146-01	KNOB, DISC	
66	4-992-147-01	KNOB, TIMER	
67	4-992-148-01	KNOB, DBFB	
68	4-992-149-01	KNOB, FUNCTION	
69	4-992-150-01	KNOB, OPEN/CLOSE	
* 70	1-666-440-11	SENSOR BOARD	
71	4-993-057-01	HOLDER, LED	
72	4-993-076-01	KNOB (L), TAPE PHONO	
73	4-993-077-01	KNOB (R), TAPE PHONO	
75	4-992-826-01	PLATE, DISPLAY	
76	4-992-827-01	HOLDER, DISPLAY	
* 77	4-992-828-01	HOLDER (LED3-10), LED	
LCD601	1-801-841-11	DISPLAY PANEL, LIQUID CRYSTAL	

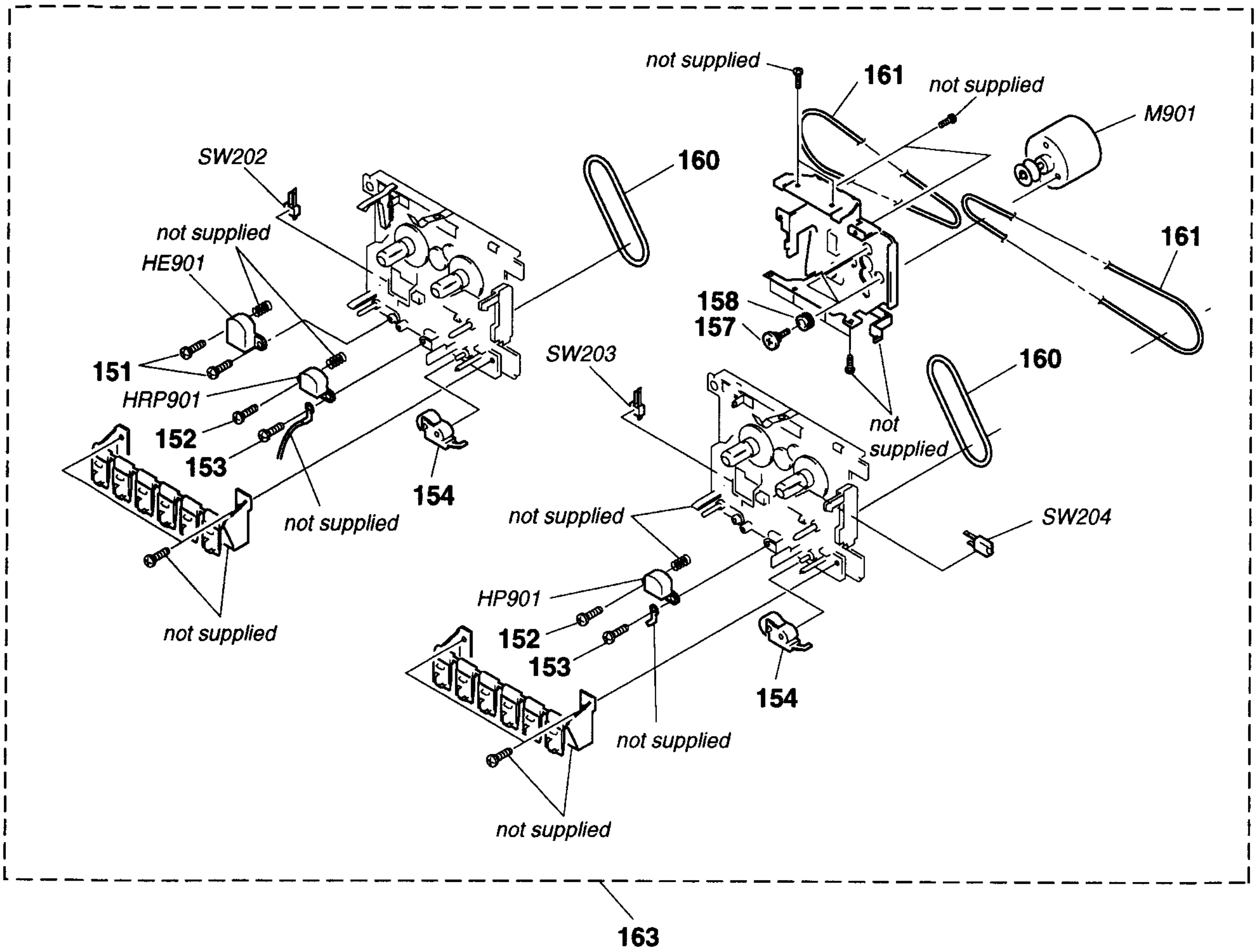
6-3. CASSETTE MECHANISM DECK SECTION 1



Ref. No.	Part No.	Description	Remark
101	4-992-133-01	BUTTON, REC	
102	4-992-134-01	BUTTON (A), PLAY	
103	4-992-135-01	BUTTON (A), REW	
104	4-992-136-01	BUTTON (A), F.F	
105	4-992-137-01	BUTTON (A), STOP/EJECT	
106	4-992-489-01	BUTTON (A), PAUSE	

Ref. No.	Part No.	Description	Remark
107	4-992-139-01	BUTTON (B), PLAY	
108	4-992-140-01	BUTTON (B), REW	
109	4-992-141-01	BUTTON (B), F.F	
110	4-992-142-01	BUTTON (B), STOP/EJECT	
111	4-992-138-01	BUTTON (B), PAUSE	

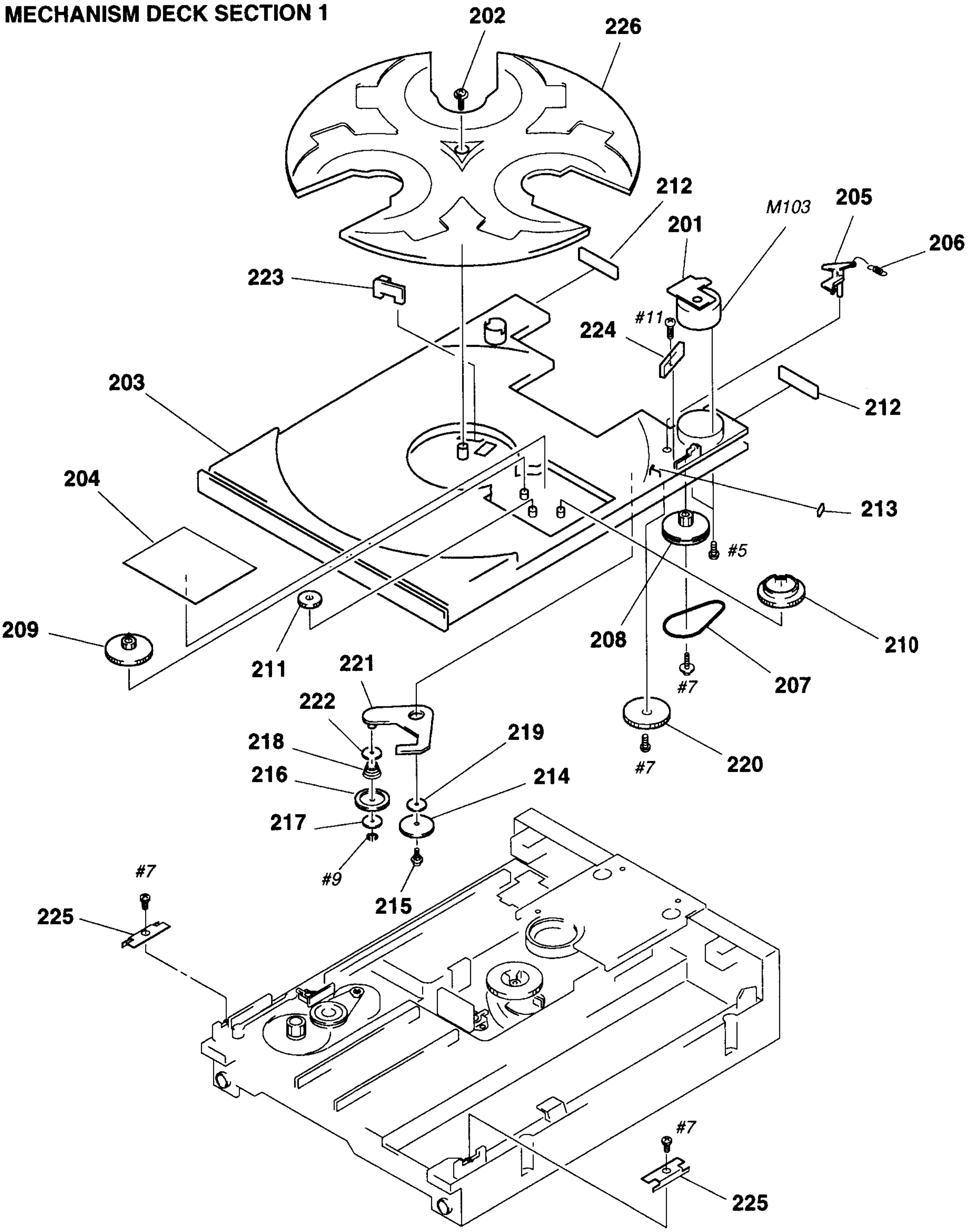
6-4. CASSETTE MECHANISM DECK SECTION 2


not supplied
161
not supplied
M901
SW202
160
161
not supplied
HE901
158
157
151
SW203
160
HRP901
152
153
not
supplied
154
not supplied
not supplied
SW204
HP901
152
153
154
not supplied
not supplied
not supplied
163

Ref. No.	Part No.	Description	Remark
151	9-980-282-01	E HEAD SCREW	
152	9-980-284-01	AZIMUTH SCREW	
153	9-980-283-01	HEAD SCREW ISO	
154	9-980-272-01	PINCH ROLLER ARM ASSY	
157	9-980-275-01	MOTOR COLLAR SCREW	
158	9-980-274-01	MOTOR RUBBER	
160	9-980-273-01	RF BELT	
161	9-980-277-01	MAIN BELT	
* 163	1-759-417-11	DECK, MECHANICAL	

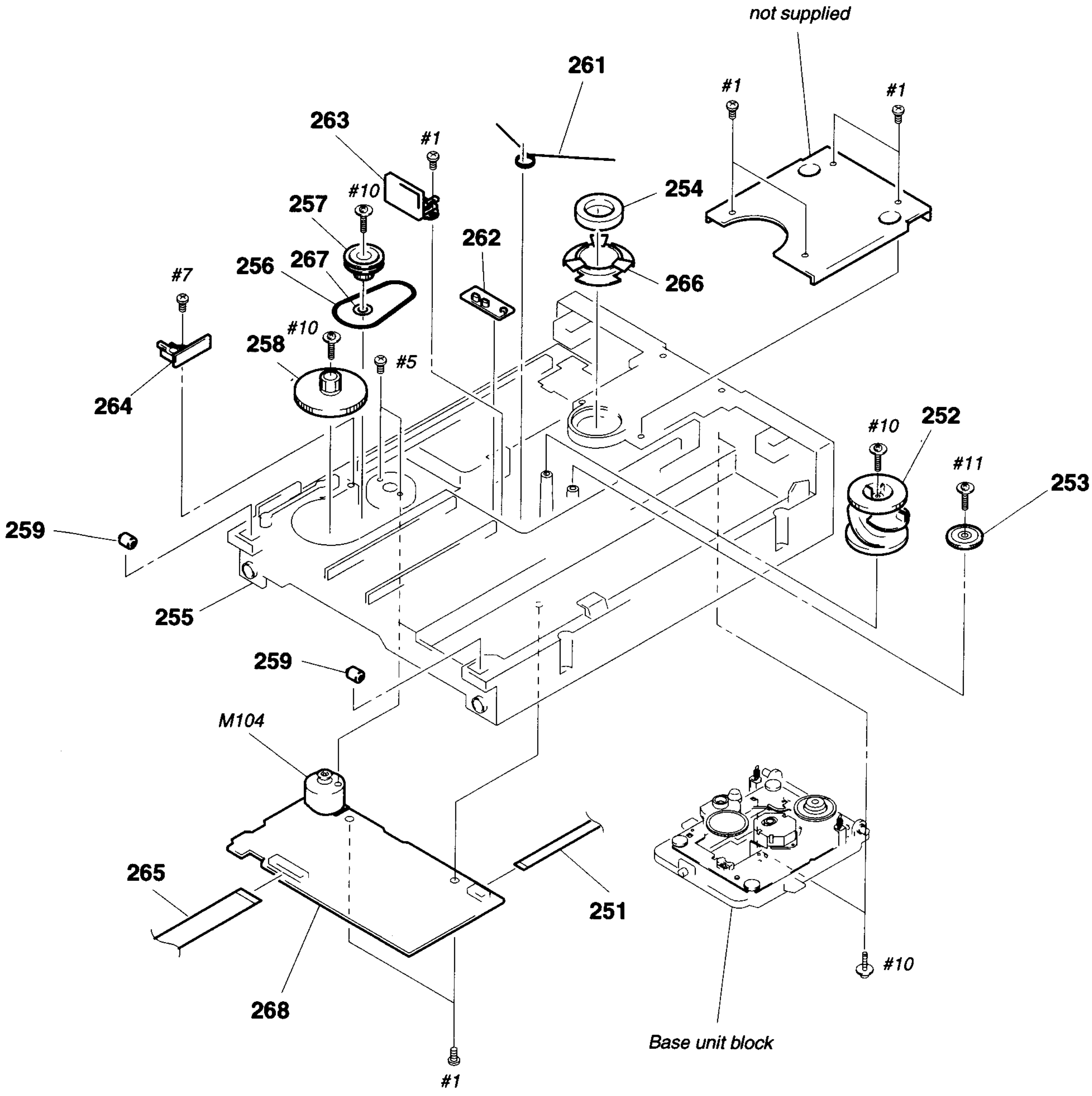
Ref. No.	Part No.	Description	Remark
HE901	9-980-280-01	E HEAD (ERASE)	
HP901	9-980-287-01	HEAD (PLAY)	
HRP901	9-980-279-01	HEAD (REC/PLAY)	
M901	9-980-281-01	MOTOR (CAPSTAN/REEL)	
SW202	9-980-270-01	LEAF SWITCH (A DECK)	
SW203	9-980-270-01	LEAF SWITCH (B DECK)	
SW204	9-980-271-01	LEAF SWITCH (PLAY)	

6-5. CD MECHANISM DECK SECTION 1


202
226
212
201
M103
205
206
223
#11
224
212
203
204
213
#5
209
208
210
211
221
#7
207
222
218
219
216
214
#7
220
217
#9
#7
225
215
#7
225

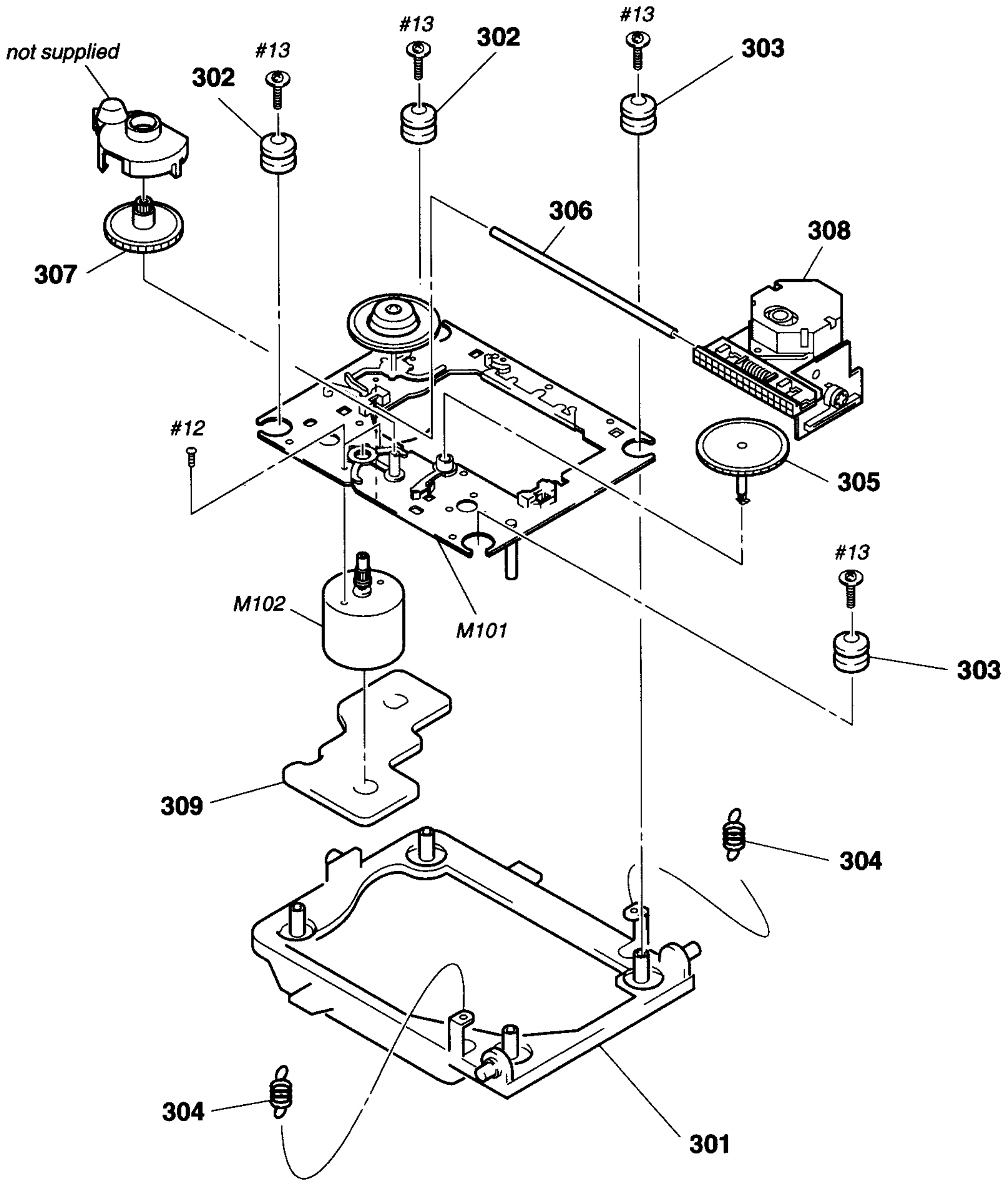
Ref. No.	Part No.	Description	Remark
* 201	1-666-451-11	MOTOR BOARD	
202	3-669-480-11	+ PTPWH 2	
203	4-992-168-01	TRAY, CHANGER BASE	
204	4-992-180-01	PLATE, BLIND	
205	4-992-181-01	LEVER, SENSOR (SW)	
206	4-992-182-01	SPRING, SENSOR (SW) LEVER	
207	4-992-170-01	BELT, LOADING	
208	4-992-171-01	PULLEY, GEAR	
209	4-992-179-01	GEAR, TR	
210	4-992-177-01	GEAR, TR LOCK	
211	4-992-178-01	GEAR (C), RELAY	
212	4-992-187-01	CUSHION	
213	4-992-186-01	CUSHION, SW LEVER	
214	4-992-173-01	GEAR (B), RELAY	
215	4-992-183-01	SCREW, RELAY GEAR (B)	
216	4-992-174-01	GEAR, CHANGE	
217	4-992-184-01	WASHER, CHANGE GEAR	
218	4-992-176-01	SPRING, CHANGE GEAR	
219	4-992-185-01	WASHER, CHANGE PLATE	
220	4-992-172-01	GEAR (A), RELAY	
* 221	4-993-032-01	PLATE, CHANGE	
222	4-993-033-01	WASHER, POLY ETHYLENE	
* 223	1-666-448-11	SW (B) BOARD	
* 224	1-666-447-11	SW (A) BOARD	
* 225	4-993-034-01	GUIDE, RAIL	
226	4-993-140-01	TURN TABLE	
M103	X-4948-765-1	MOTOR ASSY (TURN TABLE)	

6-6. CD MECHANISM DECK SECTION 2


not supplied
261
#1
#1
263
#1
#10
257
254
262
256
267
266
#7
#10
258
#5
264
#10
252
#11
253
259
255
259
M104
265
251
#10
268
Base unit block
#1

Ref. No.	Part No.	Description	Remark
251	1-769-856-11	WIRE (FLAT TYPE) (5 CORE)	
252	4-992-190-01	UD-CAM	
253	4-992-191-01	UD-GEAR	
254	4-992-195-01	MAGNET	
* 255	4-992-196-01	CHASSIS, MAIN	
256	4-992-197-01	BELT, LOADING GEAR	
257	4-992-198-01	PULLEY (B), GEAR	
258	4-992-199-01	GEAR, SLIDE	
259	4-992-200-01	ROLLER	
261	4-992-192-01	SPRING, BRAKE CAM	
262	4-992-193-01	LEVER, SW	
* 263	1-666-450-11	SW (D) BOARD	
* 264	1-666-449-11	SW (C) BOARD	
265	1-773-152-11	WIRE (FLAT TYPE) (21 CORE)	
266	4-992-194-01	CLAMP	
267	4-992-201-01	WASHER, POLYETHYLENE	
* 268	A-4398-909-A	CD DECODER BOARD, COMPLETE	
M104	X-4948-766-1	MOTOR ASSY (A) (TRAY)	

6-7. BASE UNIT SECTION (KSM-213BCM)


not supplied
#13
302
#13
302
#13
303
306
308
307
#12
305
#13
M102
M101
303
309
304
304
301

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description	Remark
301	4-992-164-01	BASE, KSM MECHANICAL	
302	4-992-165-01	DAMPER (GREEN)	
303	4-992-166-01	DAMPER (RED)	
304	4-992-167-01	SPRING, MECHANICAL BASE	
305	2-626-907-01	GEAR (A) (S)	
306	2-626-908-01	SHAFT, SLED	
307	2-627-003-02	GEAR (B)	
⚠308	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
* 309	1-639-678-12	MOTOR (6P)(S) BOARD	
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)	
M102	X-2625-769-1	MOTOR ASSY (SLED)	

AC POWER SUPPLY **AC SUPPLY**

CD DECODER

SECTION 7
ELECTRICAL PARTS LIST

Note:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μ A..., uPA...: μ PA..., uPB...: μ PB..., uPC...: μ PC..., uPD...: μ PD...
- CAPACITORS
  uF : μ F
- COILS
  uH : μ H
- Abbreviation
  MX : Mexican model
  AR : Argentine model

Ref. No.	Part No.	Description			Remark
*	1-666-674-11	AC POWER SUPPLY BOARD (AEP,UK)			
		*********************			
**					
*	1-666-445-11	AC SUPPLY BOARD (E,AR,MX)			
		***************			
		< FUSE >			
⚠F801	1-532-465-31	FUSE (T3.15A/250V)			
* F801HA	1-533-213-31	HOLDER, FUSE (E,AR)			
* F801HB	1-533-213-31	HOLDER, FUSE (E,AR)			
**					
*	A-4398-909-A	CD DECODER BOARD, COMPLETE			
		**************************			
		< CAPACITOR >			
C02	1-126-963-11	ELECT	4.7uF	20%	50V
C03	1-126-933-11	ELECT	100uF	20%	10V
C04	1-162-306-11	CERAMIC	0.01uF	20%	16V
C05	1-136-159-00	FILM	0.033uF	5%	50V
C06	1-162-306-11	CERAMIC	0.01uF	20%	16V
C07	1-136-159-00	FILM	0.033uF	5%	50V
C07A	1-162-199-31	CERAMIC	10PF	5%	50V
C08	1-161-494-00	CERAMIC	0.022uF		25V
C09	1-126-959-11	ELECT	0.47uF	20%	50V
C10	1-162-306-11	CERAMIC	0.01uF	20%	16V
C11	1-126-933-11	ELECT	100uF	20%	10V
C11A	1-164-159-11	CERAMIC	0.1uF		50V
C12	1-162-306-11	CERAMIC	0.01uF	20%	16V
C13	1-164-159-11	CERAMIC	0.1uF		50V
C14	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C15	1-164-159-11	CERAMIC	0.1uF		50V
C16	1-136-159-00	FILM	0.033uF	5%	50V
C17	1-136-165-00	FILM	0.1uF	5%	50V
C18	1-164-159-11	CERAMIC	0.1uF		50V
C19	1-126-963-11	ELECT	4.7uF	20%	50V
C20	1-162-306-11	CERAMIC	0.01uF	20%	16V
C21	1-136-157-00	FILM	0.022uF	5%	50V
C22	1-126-933-11	ELECT	100uF	20%	10V
C23	1-164-159-11	CERAMIC	0.1uF		50V
C24	1-126-965-11	ELECT	22uF	20%	50V
C25	1-126-960-11	ELECT	1uF	20%	50V
C26	1-161-494-00	CERAMIC	0.022uF	30%	25V
C27	1-162-306-11	CERAMIC	0.01uF	20%	16V
C28	1-164-159-11	CERAMIC	0.1uF		50V
C29	1-126-935-11	ELECT	470uF	20%	16V

Ref. No.	Part No.	Description			Remark
C30	1-126-933-11	ELECT	100uF	20%	10V
C31	1-162-600-11	CERAMIC	0.047uF	10%	16V
C32	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C33	1-162-306-11	CERAMIC	0.01uF	20%	16V
C34	1-162-286-31	CERAMIC	220PF	10%	50V
C35	1-162-306-11	CERAMIC	0.01uF	20%	16V
C36	1-126-963-11	ELECT	4.7uF	20%	50V
C37	1-164-159-11	CERAMIC	0.1uF		50V
C38	1-102-958-00	CERAMIC	20PF	5%	50V
C39	1-102-958-00	CERAMIC	20PF	5%	50V
C42	1-126-012-11	ELECT	470uF	20%	16V
C43	1-126-933-11	ELECT	100uF	20%	10V
C45	1-126-923-11	ELECT	220uF	20%	10V
C46	1-126-933-11	ELECT	100uF	20%	10V
C51	1-162-288-31	CERAMIC	330PF	10%	50V
C51A	1-126-959-11	ELECT	0.47uF	20%	50V
C52	1-162-288-31	CERAMIC	330PF	10%	50V
C53	1-162-284-31	CERAMIC	150PF	10%	50V
C54	1-162-284-31	CERAMIC	150PF	10%	50V
C55	1-162-284-31	CERAMIC	150PF	10%	50V
C56	1-162-284-31	CERAMIC	150PF	10%	50V
C57	1-126-961-11	ELECT	2.2uF	20%	50V
C58	1-126-961-11	ELECT	2.2uF	20%	50V
C59	1-162-294-31	CERAMIC	0.001uF	10%	50V
C60	1-162-294-31	CERAMIC	0.001uF	10%	50V
C80	1-164-159-11	CERAMIC	0.1uF		50V
C81	1-164-159-11	CERAMIC	0.1uF		50V
C82	1-164-159-11	CERAMIC	0.1uF		50V
C83	1-164-159-11	CERAMIC	0.1uF		50V
C84	1-162-282-31	CERAMIC	100PF	10%	50V
C85	1-162-292-31	CERAMIC	680PF	10%	50V
C86	1-162-282-31	CERAMIC	100PF	10%	50V
C86A	1-161-494-00	CERAMIC	0.022uF		25V
C87	1-162-282-31	CERAMIC	100PF	10%	50V
C88	1-162-282-31	CERAMIC	100PF	10%	50V
C89	1-161-494-00	CERAMIC	0.022uF		25V
C90	1-161-494-00	CERAMIC	0.022uF		25V
C93	1-126-925-11	ELECT	470uF	20%	10V
C94	1-126-933-11	ELECT	100uF	20%	10V
C98	1-161-494-00	CERAMIC	0.022uF		25V
		< CONNECTOR >			
CN01	1-580-475-11	SOCKET, CONNECTOR 16P			
CN05	1-564-721-11	PIN, CONNECTOR (SMALL TYPE) 5P			
CN06	1-695-366-21	PIN, CONNECTOR (PC BOARD) 5P			
CN09	1-770-528-31	PIN, CONNECTOR (PC BOARD) 21P			

Ref. No.	Part No.	Description			Remark	
		< DIODE >				
D01	8-719-987-63	DIODE 1N4148M				
D03	8-719-109-89	DIODE RD5.6ESB2				
D09	8-719-109-93	DIODE RD6.2ESB2				
D20	8-719-987-63	DIODE 1N4148M				
D21	8-719-987-63	DIODE 1N4148M				
D22	8-719-987-63	DIODE 1N4148M				
D23	8-719-987-63	DIODE 1N4148M				
D24	8-719-987-63	DIODE 1N4148M				
D25	8-719-987-63	DIODE 1N4148M				
D26	8-719-987-63	DIODE 1N4148M				
D27	8-719-987-63	DIODE 1N4148M				
D35	8-719-982-11	DIODE MTZJ-4.3B				
D36	8-719-031-85	DIODE 1N4002L				
		< IC >				
IC01	8-752-069-56	IC CXA1782BQ				
IC02	8-759-388-27	IC TC9173P				
IC03	8-759-429-31	IC BA5941FP				
IC04	8-752-369-28	IC CXD2508Q				
IC05	8-759-505-55	IC NJM4558L				
		< COIL >				
L01	1-410-509-11	INDUCTOR 10uH				
		< TRANSISTOR >				
Q01	8-729-195-23	TRANSISTOR 2SA952				
Q02	8-729-195-23	TRANSISTOR 2SA952				
Q04	8-729-194-57	TRANSISTOR 2SC945-P				
Q05	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q06	8-729-195-23	TRANSISTOR 2SA952				
Q07	8-729-195-23	TRANSISTOR 2SA952				
Q08	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q09	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q10	8-729-195-23	TRANSISTOR 2SA952				
Q11	8-729-195-23	TRANSISTOR 2SA952				
Q12	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q13	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q14	8-729-142-46	TRANSISTOR 2SC2001-LK				
Q15	8-729-142-46	TRANSISTOR 2SC2001-LK				
		< RESISTOR >				
R01	1-249-459-11	CARBON	12K	5%	1/4W	
R02	1-249-430-11	CARBON	12K	5%	1/4W	
R03	1-249-397-11	CARBON	22	5%	1/4W	F
R05	1-247-863-11	CARBON	22K	5%	1/4W	
R06	1-247-847-11	CARBON	4.7K	5%	1/4W	
R07	1-249-430-11	CARBON	12K	5%	1/4W	
R07A	1-249-430-11	CARBON	12K	5%	1/4W	
R07B	1-249-430-11	CARBON	12K	5%	1/4W	
R08	1-249-460-11	CARBON	15K	5%	1/4W	
R09	1-249-460-11	CARBON	15K	5%	1/4W	
R10	1-247-718-11	CARBON	2.7K	5%	1/4W	F
R11	1-249-438-11	CARBON	56K	5%	1/4W	F
R12	1-247-879-11	CARBON	100K	5%	1/4W	
R13	1-247-896-11	CARBON	510K	5%	1/4W	
R14	1-247-879-11	CARBON	100K	5%	1/4W	

Ref. No.	Part No.	Description			Remark	
R15	1-247-881-00	CARBON	120K	5%	1/4W	
R16	1-247-887-00	CARBON	220K	5%	1/4W	
R17	1-247-879-11	CARBON	100K	5%	1/4W	
R18	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R19	1-249-431-11	CARBON	15K	5%	1/4W	
R21	1-247-863-11	CARBON	22K	5%	1/4W	
R22	1-247-879-11	CARBON	100K	5%	1/4W	
R23	1-249-430-11	CARBON	12K	5%	1/4W	
R24	1-247-883-00	CARBON	150K	5%	1/4W	
R25	1-247-879-11	CARBON	100K	5%	1/4W	
R26	1-249-855-11	CARBON	10K	5%	1/4W	
R27	1-249-430-11	CARBON	12K	5%	1/4W	
R28	1-249-855-11	CARBON	10K	5%	1/4W	
R29	1-249-843-11	CARBON	3.3K	5%	1/4W	
R30	1-249-843-11	CARBON	3.3K	5%	1/4W	
R31	1-249-855-11	CARBON	10K	5%	1/4W	
R32	1-247-903-00	CARBON	1M	5%	1/4W	
R33	1-249-855-11	CARBON	10K	5%	1/4W	
R34	1-247-879-11	CARBON	100K	5%	1/4W	
R35	1-249-847-11	CARBON	4.7K	5%	1/4W	
R36	1-249-847-11	CARBON	4.7K	5%	1/4W	
R37	1-247-807-11	CARBON	100	5%	1/4W	
R38	1-247-807-11	CARBON	100	5%	1/4W	
R39	1-249-847-11	CARBON	4.7K	5%	1/4W	
R40	1-249-847-11	CARBON	4.7K	5%	1/4W	
R41	1-247-807-11	CARBON	100	5%	1/4W	
R42	1-247-807-11	CARBON	100	5%	1/4W	
R44	1-247-807-11	CARBON	100	5%	1/4W	
R44A	1-249-847-11	CARBON	4.7K	5%	1/4W	
R46	1-249-855-11	CARBON	10K	5%	1/4W	
R46A	1-249-409-11	CARBON	220	5%	1/4W	F
R50	1-249-847-11	CARBON	4.7K	5%	1/4W	
R50A	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R52	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R53	1-249-411-11	CARBON	330	5%	1/4W	
R55	1-249-847-11	CARBON	4.7K	5%	1/4W	
R56	1-249-847-11	CARBON	4.7K	5%	1/4W	
R57	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R58	1-249-442-11	CARBON	510	5%	1/4W	
R59	1-247-903-00	CARBON	1M	5%	1/4W	
R61	1-249-855-11	CARBON	10K	5%	1/4W	
R62	1-249-855-11	CARBON	10K	5%	1/4W	
R63	1-249-855-11	CARBON	10K	5%	1/4W	
R64	1-249-855-11	CARBON	10K	5%	1/4W	
R65	1-247-864-11	CARBON	24K	5%	1/4W	
R66	1-247-864-11	CARBON	24K	5%	1/4W	
R67	1-247-864-11	CARBON	24K	5%	1/4W	
R68	1-247-864-11	CARBON	24K	5%	1/4W	
R69	1-249-430-11	CARBON	12K	5%	1/4W	
R70	1-249-430-11	CARBON	12K	5%	1/4W	
R71	1-249-430-11	CARBON	12K	5%	1/4W	
R72	1-249-430-11	CARBON	12K	5%	1/4W	
R73	1-249-839-11	CARBON	2.2K	5%	1/4W	
R74	1-249-839-11	CARBON	2.2K	5%	1/4W	
R75	1-249-847-11	CARBON	4.7K	5%	1/4W	
R76	1-249-847-11	CARBON	4.7K	5%	1/4W	
R78	1-249-847-11	CARBON	4.7K	5%	1/4W	

CD DECODER | DISC LED | MAIN

Ref. No.	Part No.	Description			Remark
R79	1-249-405-11	CARBON	100	5%	1/4W F
R80	1-247-883-00	CARBON	150K	5%	1/4W
R81	1-247-807-11	CARBON	100	5%	1/4W
R82	1-247-807-11	CARBON	100	5%	1/4W
R83	1-249-469-11	CARBON	100K	5%	1/4W
R83A	1-247-863-11	CARBON	22K	5%	1/4W
R84	1-249-465-11	CARBON	47K	5%	1/4W
R85	1-249-465-11	CARBON	47K	5%	1/4W
R86	1-249-465-11	CARBON	47K	5%	1/4W
R87	1-249-465-11	CARBON	47K	5%	1/4W
R88	1-249-469-11	CARBON	100K	5%	1/4W
R89	1-249-839-11	CARBON	2.2K	5%	1/4W
R90	1-249-839-11	CARBON	2.2K	5%	1/4W
R91	1-249-839-11	CARBON	2.2K	5%	1/4W
R92	1-249-839-11	CARBON	2.2K	5%	1/4W
R93	1-249-420-11	CARBON	1.8K	5%	1/4W F
R93A	1-249-420-11	CARBON	1.8K	5%	1/4W F
R94	1-249-420-11	CARBON	1.8K	5%	1/4W F
R94A	1-249-420-11	CARBON	1.8K	5%	1/4W F
R99	1-247-704-11	CARBON	220	5%	1/4W F

< VARIABLE RESISTOR >

VR01	1-228-996-00	RES, ADJ, METAL 47K
VR02	1-228-998-00	RES, ADJ, METAL 220K

< VIBRATOR >

XTL01	1-760-123-11	VIBRATOR, CRYSTAL (33.8688MHz)

****

*	1-666-438-11	DISC LED BOARD **************
*	4-992-828-01	HOLDER (LED3-10), LED

< DIODE >

LED602	8-719-046-80	DIODE SML19416W-TP4 (DISC 1)
LED603	8-719-046-80	DIODE SML19416W-TP4 (DISC 2)
LED604	8-719-046-80	DIODE SML19416W-TP4 (DISC 3)

< RESISTOR >

R630	1-249-408-11	CARBON	180	5%	1/4W F
R631	1-249-408-11	CARBON	180	5%	1/4W F
R632	1-249-408-11	CARBON	180	5%	1/4W F

< SWITCH >

S624	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC 1)
S625	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC 2)
S626	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC 3)

****

*	A-4398-915-A	MAIN BOARD, COMPLETE (MX) ****************************
*	A-4403-222-A	MAIN BOARD, COMPLETE (E,AR) *******************
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT

< CAPACITOR >

Ref. No.	Part No.	Description			Remark
C1	1-161-494-00	CERAMIC	0.022uF		25V
C2	1-161-494-00	CERAMIC	0.022uF		25V
C201	1-162-286-31	CERAMIC	220PF	10%	50V
C202	1-162-286-31	CERAMIC	220PF	10%	50V
C203	1-162-292-31	CERAMIC	680PF	10%	50V
C204	1-162-292-31	CERAMIC	680PF	10%	50V
C205	1-162-286-31	CERAMIC	220PF	10%	50V
C206	1-162-286-31	CERAMIC	220PF	10%	50V
C207	1-126-964-11	ELECT	10uF	20%	50V
C208	1-126-964-11	ELECT	10uF	20%	50V
C209	1-130-485-00	MYLAR	0.015uF	5%	50V
C210	1-130-485-00	MYLAR	0.015uF	5%	50V
C211	1-126-044-11	ELECT	1uF	20%	50V
C212	1-126-044-11	ELECT	1uF	20%	50V
C215	1-164-736-31	CERAMIC	0.0012uF	10%	50V
C216	1-164-736-31	CERAMIC	0.0012uF	10%	50V
C217	1-162-286-31	CERAMIC	220PF	10%	50V
C218	1-162-286-31	CERAMIC	220PF	10%	50V
C219	1-126-962-11	ELECT	3.3uF	20%	50V
C220	1-126-962-11	ELECT	3.3uF	20%	50V
C221	1-126-644-11	ELECT	100uF	20%	16V
C222	1-126-644-11	ELECT	100uF	20%	16V
C223	1-162-294-31	CERAMIC	0.001uF	10%	50V
C224	1-162-294-31	CERAMIC	0.001uF	10%	50V
C225	1-126-962-11	ELECT	3.3uF	20%	50V
C226	1-126-962-11	ELECT	3.3uF	20%	50V
C228	1-126-964-11	ELECT	10uF	20%	50V
C230	1-137-350-11	FILM	0.015uF	5%	100V
C231	1-137-150-11	FILM	0.01uF	5%	100V
C232	1-130-479-00	MYLAR	0.0047uF	5%	50V
C233	1-130-487-00	MYLAR	0.022uF	5%	50V
C234	1-124-910-11	ELECT	47uF	20%	50V
C235	1-161-494-00	CERAMIC	0.022uF		25V
C237	1-126-025-11	ELECT	330uF	20%	16V
C238	1-126-962-11	ELECT	3.3uF	20%	50V
C239	1-162-292-31	CERAMIC	680PF	10%	50V
C240	1-162-292-31	CERAMIC	680PF	10%	50V
C241	1-126-644-11	ELECT	100uF	20%	16V
C242	1-126-959-11	ELECT	0.47uF	20%	50V
C243	1-126-961-11	ELECT	2.2uF	20%	50V
C281	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C282	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C300	1-164-159-11	CERAMIC	0.1uF		50V
C301	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C302	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C303	1-162-282-31	CERAMIC	100PF	10%	50V
C304	1-162-282-31	CERAMIC	100PF	10%	50V
C305	1-162-290-31	CERAMIC	470PF	10%	50V
C306	1-162-290-31	CERAMIC	470PF	10%	50V
C307	1-126-963-11	ELECT	4.7uF	20%	50V
C308	1-126-963-11	ELECT	4.7uF	20%	50V
C309	1-162-294-31	CERAMIC	0.001uF	10%	50V
C310	1-162-294-31	CERAMIC	0.001uF	10%	50V
C313	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C314	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C315	1-130-494-11	MYLAR	0.082uF	5%	50V

Ref. No.	Part No.	Description			Remark
C316	1-130-494-11	MYLAR	0.082uF	5%	50V
C317	1-126-959-11	ELECT	0.47uF	20%	50V
C318	1-126-959-11	ELECT	0.47uF	20%	50V
C319	1-126-644-11	ELECT	100uF	20%	16V
C320	1-126-644-11	ELECT	100uF	20%	16V
C401	1-162-288-31	CERAMIC	330PF	10%	50V
C402	1-162-288-31	CERAMIC	330PF	10%	50V
C403	1-126-959-11	ELECT	0.47uF	20%	50V
C404	1-126-959-11	ELECT	0.47uF	20%	50V
C405	1-126-959-11	ELECT	0.47uF	20%	50V
C406	1-126-959-11	ELECT	0.47uF	20%	50V
C407	1-126-959-11	ELECT	0.47uF	20%	50V
C408	1-126-959-11	ELECT	0.47uF	20%	50V
C409	1-126-959-11	ELECT	0.47uF	20%	50V
C410	1-126-959-11	ELECT	0.47uF	20%	50V
C411	1-162-199-31	CERAMIC	10PF	5%	50V
C412	1-162-199-31	CERAMIC	10PF	5%	50V
C415	1-162-290-31	CERAMIC	470PF	10%	50V
C416	1-162-290-31	CERAMIC	470PF	10%	50V
C417	1-130-485-00	MYLAR	0.015uF	5%	50V
C418	1-130-485-00	MYLAR	0.015uF	5%	50V
C419	1-162-292-31	CERAMIC	680PF	10%	50V
C420	1-162-292-31	CERAMIC	680PF	10%	50V
C421	1-162-294-31	CERAMIC	0.001uF	10%	50V
C422	1-162-294-31	CERAMIC	0.001uF	10%	50V
C425	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C426	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C427	1-130-485-00	MYLAR	0.015uF	5%	50V
C428	1-130-485-00	MYLAR	0.015uF	5%	50V
C429	1-162-284-31	CERAMIC	150PF	10%	50V
C430	1-162-284-31	CERAMIC	150PF	10%	50V
C431	1-162-305-11	CERAMIC	0.0068uF	20%	16V
C432	1-162-305-11	CERAMIC	0.0068uF	20%	16V
C433	1-126-934-11	ELECT	220uF	20%	16V
C434	1-126-934-11	ELECT	220uF	20%	16V
C451	1-126-959-11	ELECT	0.47uF	20%	50V
C452	1-126-959-11	ELECT	0.47uF	20%	50V
C453	1-162-282-31	CERAMIC	100PF	10%	50V
C454	1-162-282-31	CERAMIC	100PF	10%	50V
C455	1-124-767-00	ELECT	2.2uF	20%	50V
C456	1-124-767-00	ELECT	2.2uF	20%	50V
C457	1-126-934-11	ELECT	220uF	20%	16V
C458	1-126-964-11	ELECT	10uF	20%	50V
C459	1-164-159-11	CERAMIC	0.1uF		50V
C460	1-164-159-11	CERAMIC	0.1uF		50V
C461	1-126-964-11	ELECT	10uF	20%	50V
C462	1-126-964-11	ELECT	10uF	20%	50V
C463	1-126-934-11	ELECT	220uF	20%	16V
C471	1-162-282-31	CERAMIC	100PF	10%	50V
C472	1-162-282-31	CERAMIC	100PF	10%	50V
C473	1-162-282-31	CERAMIC	100PF	10%	50V
C474	1-162-282-31	CERAMIC	100PF	10%	50V
C475	1-124-767-00	ELECT	2.2uF	20%	50V
C476	1-124-767-00	ELECT	2.2uF	20%	50V
C477	1-124-767-00	ELECT	2.2uF	20%	50V
C478	1-124-767-00	ELECT	2.2uF	20%	50V
C479	1-126-644-11	ELECT	100uF	20%	16V
C480	1-126-644-11	ELECT	100uF	20%	16V

Ref. No.	Part No.	Description			Remark
C491	1-126-044-11	ELECT	1uF	20%	50V
C492	1-126-044-11	ELECT	1uF	20%	50V
C493	1-162-215-31	CERAMIC	47PF	5%	50V
C494	1-162-215-31	CERAMIC	47PF	5%	50V
C495	1-126-959-11	ELECT	0.47uF	20%	50V
C496	1-126-959-11	ELECT	0.47uF	20%	50V
C497	1-126-644-11	ELECT	100uF	20%	16V
C499	1-126-964-11	ELECT	10uF	20%	50V
C500	1-164-159-11	CERAMIC	0.1uF		50V
C501	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C502	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C505	1-126-964-11	ELECT	10uF	20%	50V
C506	1-126-964-11	ELECT	10uF	20%	50V
C507	1-126-968-11	ELECT	100uF	20%	50V
C508	1-126-969-11	ELECT	220uF	20%	50V
C509	1-126-969-11	ELECT	220uF	20%	50V
C510	1-164-159-11	CERAMIC	0.1uF		50V
C511	1-162-195-31	CERAMIC	4.7PF	10%	50V
C512	1-162-195-31	CERAMIC	4.7PF	10%	50V
C513	1-137-354-11	FILM	0.1uF	5%	100V
C514	1-137-354-11	FILM	0.1uF	5%	100V
C515	1-126-968-11	ELECT	100uF	20%	50V
C516	1-164-159-11	CERAMIC	0.1uF		50V
C517	1-126-968-11	ELECT	100uF	20%	50V
C523	1-164-159-11	CERAMIC	0.1uF		50V
C524	1-164-159-11	CERAMIC	0.1uF		50V
C551	1-161-494-00	CERAMIC	0.022uF		25V
C552	1-161-494-00	CERAMIC	0.022uF		25V
C553	1-126-044-11	ELECT	1uF	20%	50V
C554	1-162-306-11	CERAMIC	0.01uF	20%	16V
C555	1-126-644-11	ELECT	100uF	20%	16V
C556	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C557	1-126-963-11	ELECT	4.7uF	20%	50V
C558	1-126-644-11	ELECT	100uF	20%	16V
C581	1-124-910-11	ELECT	47uF	20%	50V
C582	1-164-159-11	CERAMIC	0.1uF		50V
C583	1-126-644-11	ELECT	100uF	20%	16V
C701	1-126-974-11	ELECT	3300uF	20%	50V
C702	1-126-974-11	ELECT	3300uF	20%	50V
C708	1-161-494-00	CERAMIC	0.022uF		25V
C709	1-161-494-00	CERAMIC	0.022uF		25V
C710	1-126-943-11	ELECT	2200uF	20%	25V
C711	1-124-910-11	ELECT	47uF	20%	50V
C712	1-126-644-11	ELECT	100uF	20%	16V
C713	1-161-494-00	CERAMIC	0.022uF		25V
C714	1-161-494-00	CERAMIC	0.022uF		25V
C715	1-161-494-00	CERAMIC	0.022uF		25V
C716	1-126-644-11	ELECT	100uF	20%	16V
C717	1-126-644-11	ELECT	100uF	20%	16V
C718	1-126-012-11	ELECT	470uF	20%	16V
C719	1-161-494-00	CERAMIC	0.022uF		25V
C720	1-126-644-11	ELECT	100uF	20%	16V
C721	1-161-494-00	CERAMIC	0.022uF		25V
C722	1-126-012-11	ELECT	470uF	20%	16V
C723	1-161-494-00	CERAMIC	0.022uF		25V
C724	1-126-644-11	ELECT	100uF	20%	16V
C725	1-161-494-00	CERAMIC	0.022uF		25V

MAIN

Ref. No.	Part No.	Description			Remark
C726	1-126-644-11	ELECT	100uF	20%	16V
C727	1-161-494-00	CERAMIC	0.022uF		25V
C728	1-126-644-11	ELECT	100uF	20%	16V
C729	1-161-494-00	CERAMIC	0.022uF		25V
C730	1-126-376-11	ELECT	470uF	20%	25V
C731	1-161-494-00	CERAMIC	0.022uF		25V
C732	1-126-644-11	ELECT	100uF	20%	16V
C733	1-161-494-00	CERAMIC	0.022uF		25V
C734	1-126-012-11	ELECT	470uF	20%	16V
C735	1-161-494-00	CERAMIC	0.022uF		25V
C741	1-126-012-11	ELECT	470uF	20%	16V
C742	1-161-494-00	CERAMIC	0.022uF		25V
C781	1-126-044-11	ELECT	1uF	20%	50V
C791	1-164-159-11	CERAMIC	0.1uF		50V
		< CONNECTOR >			
* CN08	1-568-272-11	SOCKET, CONNECTOR 6P			
* CN101	1-779-767-11	PIN, CONNECTOR			
* CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P			
CN202	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P			
* CN203	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P			
* CN205	1-568-274-11	SOCKET, CONNECTOR 8P			
* CN301	1-770-334-11	PIN, CONNECTOR (PC BOARD) 17P			
* CN701	1-564-508-11	PLUG, CONNECTOR 5P (E,AR)			
* CN701	1-564-509-11	PLUG, CONNECTOR 6P (MX)			
		< DIODE >			
D201	8-719-987-63	DIODE 1N4148M			
D202	8-719-987-63	DIODE 1N4148M			
D203	8-719-987-63	DIODE 1N4148M			
D205	8-719-987-63	DIODE 1N4148M			
D208	8-719-987-63	DIODE 1N4148M			
D209	8-719-987-63	DIODE 1N4148M			
D211	8-719-987-63	DIODE 1N4148M			
D212	8-719-987-63	DIODE 1N4148M			
D213	8-719-987-63	DIODE 1N4148M			
D501	8-719-987-63	DIODE 1N4148M			
D551	8-719-987-63	DIODE 1N4148M			
D552	8-719-987-63	DIODE 1N4148M			
D553	8-719-987-63	DIODE 1N4148M			
D581	8-719-987-63	DIODE 1N4148M			
D582	8-719-987-63	DIODE 1N4148M			
D583	8-719-987-63	DIODE 1N4148M			
D584	8-719-987-63	DIODE 1N4148M			
D585	8-719-987-63	DIODE 1N4148M			
D701	8-719-510-33	DIODE D2SBA20			
D705	8-719-200-02	DIODE 10E2			
D706	8-719-200-02	DIODE 10E2			
D707	8-719-200-02	DIODE 10E2			
D708	8-719-200-02	DIODE 10E2			
D709	8-719-200-02	DIODE 10E2			
D711	8-719-110-31	DIODE RD12ES-B2			
D712	8-719-110-08	DIODE RD8.2ES-B2			
D713	8-719-109-93	DIODE RD6.2ESB2			
D714	8-719-110-31	DIODE RD12ES-B2			
D741	8-719-110-31	DIODE RD12ES-B2			
D781	8-719-987-63	DIODE 1N4148M			

Ref. No.	Part No.	Description	Remark
		< FUSE, FUSE HOLDER >	
⚠F701	1-532-388-31	FUSE (T2AL/250V)	
* F701H	1-533-213-31	HOLDER, FUSE (E,AR)	
* F701HA	1-533-213-31	HOLDER, FUSE (E,AR)	
		< IC >	
IC201	8-759-242-58	IC TA8189N	
IC301	8-759-634-51	IC M5218AP	
IC401	8-759-473-59	IC LC75392	
IC402	8-759-000-49	IC MC14066BCP	
IC403	8-759-505-55	IC NJM4558L	
IC501	8-749-013-85	IC STK405-070A	
IC502	8-759-111-68	IC uPC1237HA	
		< JACK >	
JK301	1-750-679-21	JACK, PIN 2P (PHONO)	
JK501	1-694-092-11	TERMINAL BOARD (SPEAKER)	
JK502	1-779-715-11	JACK (LARGE TYPE)(PHONES)	
		< COIL >	
L201	1-429-552-11	TRANSFORMER, BIAS OSCILLATION	
* L501	1-420-872-00	COIL, AIR CORE	
* L502	1-420-872-00	COIL, AIR CORE	
		< TRANSISTOR >	
Q1	8-729-194-57	TRANSISTOR 2SC945-P	
Q2	8-729-194-57	TRANSISTOR 2SC945-P	
Q201	8-729-194-57	TRANSISTOR 2SC945-P	
Q202	8-729-194-57	TRANSISTOR 2SC945-P	
Q203	8-729-194-57	TRANSISTOR 2SC945-P	
Q204	8-729-194-57	TRANSISTOR 2SC945-P	
Q205	8-729-194-57	TRANSISTOR 2SC945-P	
Q206	8-729-194-57	TRANSISTOR 2SC945-P	
Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q208	8-729-194-57	TRANSISTOR 2SC945-P	
Q209	8-729-194-57	TRANSISTOR 2SC945-P	
Q210	8-729-194-57	TRANSISTOR 2SC945-P	
Q211	8-729-194-57	TRANSISTOR 2SC945-P	
Q212	8-729-194-57	TRANSISTOR 2SC945-P	
Q213	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q214	8-729-194-57	TRANSISTOR 2SC945-P	
Q216	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q217	8-729-194-57	TRANSISTOR 2SC945-P	
Q218	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q219	8-729-194-57	TRANSISTOR 2SC945-P	
Q220	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q451	8-729-194-57	TRANSISTOR 2SC945-P	
Q452	8-729-194-57	TRANSISTOR 2SC945-P	
Q461	8-729-194-57	TRANSISTOR 2SC945-P	
Q462	8-729-194-57	TRANSISTOR 2SC945-P	
Q463	8-729-194-57	TRANSISTOR 2SC945-P	
Q491	8-729-194-57	TRANSISTOR 2SC945-P	
Q492	8-729-194-57	TRANSISTOR 2SC945-P	
Q501	8-729-194-57	TRANSISTOR 2SC945-P	
Q502	8-729-194-57	TRANSISTOR 2SC945-P	
Q503	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q551	8-729-140-84	TRANSISTOR 2SC1841-PAFAEA	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description		Remark
Q552	8-729-140-84	TRANSISTOR	2SC1841-PAFAEA	
Q553	8-729-140-82	TRANSISTOR	2SA988-PAFAEA	
Q581	8-729-231-55	TRANSISTOR	2SC2878-AB	
Q582	8-729-231-55	TRANSISTOR	2SC2878-AB	
Q583	8-729-029-67	TRANSISTOR	DTC114ESA-TP	
Q584	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q585	8-729-029-86	TRANSISTOR	DTC124ESA	
Q586	8-729-029-86	TRANSISTOR	DTC124ESA	
Q587	8-729-231-55	TRANSISTOR	2SC2878-AB	
Q588	8-729-231-55	TRANSISTOR	2SC2878-AB	
Q589	8-729-029-56	TRANSISTOR	DTA144ESA	
Q701	8-729-188-23	TRANSISTOR	2SD882-P	
Q702	8-729-142-46	TRANSISTOR	2SC2001-LK	
Q703	8-729-188-23	TRANSISTOR	2SD882-P	
Q704	8-729-142-46	TRANSISTOR	2SC2001-LK	
Q705	8-729-188-23	TRANSISTOR	2SD882-P	
Q706	8-729-119-76	TRANSISTOR	2SA1175-HFE	
Q707	8-729-194-57	TRANSISTOR	2SC945-P	
Q751	8-729-194-57	TRANSISTOR	2SC945-P	
Q781	8-729-029-86	TRANSISTOR	DTC124ESA	
Q782	8-729-029-86	TRANSISTOR	DTC124ESA	

< RESISTOR >

Ref. No.	Part No.	Description			Remark	
R1	1-247-855-11	CARBON	10K	5%	1/4W	
R2	1-247-855-11	CARBON	10K	5%	1/4W	
R201	1-249-393-11	CARBON	10	5%	1/4W	F
R202	1-249-393-11	CARBON	10	5%	1/4W	F
R203	1-247-889-00	CARBON	270K	5%	1/4W	
R204	1-247-889-00	CARBON	270K	5%	1/4W	
R205	1-249-407-11	CARBON	150	5%	1/4W	F
R206	1-249-407-11	CARBON	150	5%	1/4W	F
R207	1-249-431-11	CARBON	15K	5%	1/4W	
R208	1-249-431-11	CARBON	15K	5%	1/4W	
R209	1-247-855-11	CARBON	10K	5%	1/4W	
R210	1-247-863-11	CARBON	22K	5%	1/4W	
R211	1-247-891-00	CARBON	330K	5%	1/4W	
R212	1-247-891-00	CARBON	330K	5%	1/4W	
R213	1-247-847-11	CARBON	4.7K	5%	1/4W	
R214	1-247-847-11	CARBON	4.7K	5%	1/4W	
R215	1-247-855-11	CARBON	10K	5%	1/4W	
R216	1-249-431-11	CARBON	15K	5%	1/4W	
R217	1-247-871-11	CARBON	47K	5%	1/4W	
R218	1-247-704-11	CARBON	220	5%	1/4W	F
R219	1-247-841-11	CARBON	2.7K	5%	1/4W	
R220	1-249-434-11	CARBON	27K	5%	1/4W	
R221	1-247-879-11	CARBON	100K	5%	1/4W	
R222	1-247-879-11	CARBON	100K	5%	1/4W	
R223	1-247-855-11	CARBON	10K	5%	1/4W	
R224	1-247-855-11	CARBON	10K	5%	1/4W	
R225	1-247-863-11	CARBON	22K	5%	1/4W	
R226	1-247-863-11	CARBON	22K	5%	1/4W	
R227	1-247-885-00	CARBON	180K	5%	1/4W	
R228	1-247-885-00	CARBON	180K	5%	1/4W	
R229	1-247-881-00	CARBON	120K	5%	1/4W	
R230	1-247-881-00	CARBON	120K	5%	1/4W	
R231	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R232	1-249-420-11	CARBON	1.8K	5%	1/4W	F
R233	1-247-839-11	CARBON	2.2K	5%	1/4W	
R234	1-247-839-11	CARBON	2.2K	5%	1/4W	
R235	1-247-855-11	CARBON	10K	5%	1/4W	
R236	1-247-855-11	CARBON	10K	5%	1/4W	
R237	1-247-887-00	CARBON	220K	5%	1/4W	
R238	1-247-843-11	CARBON	3.3K	5%	1/4W	
R239	1-247-855-11	CARBON	10K	5%	1/4W	
R240	1-249-393-11	CARBON	10	5%	1/4W	F
R241	1-249-434-11	CARBON	27K	5%	1/4W	
R242	1-247-708-11	CARBON	470	5%	1/4W	F
R243	1-247-855-11	CARBON	10K	5%	1/4W	
R244	1-247-855-11	CARBON	10K	5%	1/4W	
R245	1-249-393-11	CARBON	10	5%	1/4W	F
R246	1-249-393-11	CARBON	10	5%	1/4W	F
R247	1-247-855-11	CARBON	10K	5%	1/4W	
R248	1-249-434-11	CARBON	27K	5%	1/4W	
R249	1-249-381-11	CARBON	1	5%	1/4W	F
R250	1-247-847-11	CARBON	4.7K	5%	1/4W	
R251	1-247-847-11	CARBON	4.7K	5%	1/4W	
R252	1-247-847-11	CARBON	4.7K	5%	1/4W	
R253	1-247-871-11	CARBON	47K	5%	1/4W	
R256	1-247-871-11	CARBON	47K	5%	1/4W	
R257	1-247-839-11	CARBON	2.2K	5%	1/4W	
R258	1-247-871-11	CARBON	47K	5%	1/4W	
R259	1-247-871-11	CARBON	47K	5%	1/4W	
R260	1-247-855-11	CARBON	10K	5%	1/4W	
R261	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R262	1-247-839-11	CARBON	2.2K	5%	1/4W	
R263	1-249-417-11	CARBON	1K	5%	1/4W	F
R264	1-247-839-11	CARBON	2.2K	5%	1/4W	
R265	1-247-847-11	CARBON	4.7K	5%	1/4W	
R266	1-249-417-11	CARBON	1K	5%	1/4W	F
R267	1-247-839-11	CARBON	2.2K	5%	1/4W	
R281	1-247-883-00	CARBON	150K	5%	1/4W	
R282	1-247-883-00	CARBON	150K	5%	1/4W	
R301	1-249-417-11	CARBON	1K	5%	1/4W	F
R302	1-249-417-11	CARBON	1K	5%	1/4W	F
R303	1-247-855-11	CARBON	10K	5%	1/4W	
R304	1-247-855-11	CARBON	10K	5%	1/4W	
R305	1-249-417-11	CARBON	1K	5%	1/4W	F
R306	1-249-417-11	CARBON	1K	5%	1/4W	F
R307	1-247-879-11	CARBON	100K	5%	1/4W	
R308	1-247-879-11	CARBON	100K	5%	1/4W	
R309	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R310	1-249-418-11	CARBON	1.2K	5%	1/4W	F
R311	1-247-867-11	CARBON	33K	5%	1/4W	
R312	1-247-867-11	CARBON	33K	5%	1/4W	
R313	1-247-893-11	CARBON	390K	5%	1/4W	
R314	1-247-893-11	CARBON	390K	5%	1/4W	
R315	1-247-879-11	CARBON	100K	5%	1/4W	
R316	1-247-879-11	CARBON	100K	5%	1/4W	
R317	1-247-843-11	CARBON	3.3K	5%	1/4W	
R318	1-247-843-11	CARBON	3.3K	5%	1/4W	
R319	1-249-417-11	CARBON	1K	5%	1/4W	F
R320	1-249-417-11	CARBON	1K	5%	1/4W	F
R321	1-247-710-11	CARBON	560	5%	1/4W	F
R323	1-247-704-11	CARBON	220	5%	1/4W	F
R401	1-249-430-11	CARBON	12K	5%	1/4W	
R402	1-249-430-11	CARBON	12K	5%	1/4W	

MAIN

Ref. No.	Part No.	Description			Remark	
R403	1-247-847-11	CARBON	4.7K	5%	1/4W	
R404	1-247-847-11	CARBON	4.7K	5%	1/4W	
R405	1-247-879-11	CARBON	100K	5%	1/4W	
R406	1-247-879-11	CARBON	100K	5%	1/4W	
R407	1-247-871-11	CARBON	47K	5%	1/4W	
R408	1-247-871-11	CARBON	47K	5%	1/4W	
R409	1-247-863-11	CARBON	22K	5%	1/4W	
R410	1-247-863-11	CARBON	22K	5%	1/4W	
R411	1-249-434-11	CARBON	27K	5%	1/4W	
R412	1-249-434-11	CARBON	27K	5%	1/4W	
R413	1-247-887-00	CARBON	220K	5%	1/4W	
R414	1-247-887-00	CARBON	220K	5%	1/4W	
R415	1-247-855-11	CARBON	10K	5%	1/4W	
R416	1-247-855-11	CARBON	10K	5%	1/4W	
R416	1-249-434-11	CARBON	27K	5%	1/4W	
R417	1-249-434-11	CARBON	27K	5%	1/4W	
R418	1-249-434-11	CARBON	27K	5%	1/4W	
R419	1-247-867-11	CARBON	33K	5%	1/4W	
R420	1-247-867-11	CARBON	33K	5%	1/4W	
R421	1-247-843-11	CARBON	3.3K	5%	1/4W	
R422	1-247-843-11	CARBON	3.3K	5%	1/4W	
R423	1-249-430-11	CARBON	12K	5%	1/4W	
R424	1-249-430-11	CARBON	12K	5%	1/4W	
R425	1-247-867-11	CARBON	33K	5%	1/4W	
R426	1-247-867-11	CARBON	33K	5%	1/4W	
R427	1-247-871-11	CARBON	47K	5%	1/4W	
R428	1-247-871-11	CARBON	47K	5%	1/4W	
R429	1-247-871-11	CARBON	47K	5%	1/4W	
R430	1-247-871-11	CARBON	47K	5%	1/4W	
R431	1-247-871-11	CARBON	47K	5%	1/4W	
R432	1-247-871-11	CARBON	47K	5%	1/4W	
R433	1-247-871-11	CARBON	47K	5%	1/4W	
R434	1-247-871-11	CARBON	47K	5%	1/4W	
R435	1-247-839-11	CARBON	2.2K	5%	1/4W	
R436	1-247-839-11	CARBON	2.2K	5%	1/4W	
R437	1-247-839-11	CARBON	2.2K	5%	1/4W	
R438	1-247-855-11	CARBON	10K	5%	1/4W	
R439	1-247-855-11	CARBON	10K	5%	1/4W	
R440	1-247-847-11	CARBON	4.7K	5%	1/4W	
R441	1-247-704-11	CARBON	220	5%	1/4W	F
R451	1-247-710-11	CARBON	560	5%	1/4W	F
R453	1-247-903-00	CARBON	1M	5%	1/4W	
R454	1-247-903-00	CARBON	1M	5%	1/4W	
R455	1-247-839-11	CARBON	2.2K	5%	1/4W	
R456	1-247-839-11	CARBON	2.2K	5%	1/4W	
R457	1-247-847-11	CARBON	4.7K	5%	1/4W	
R458	1-247-847-11	CARBON	4.7K	5%	1/4W	
R459	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R460	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R461	1-247-704-11	CARBON	220	5%	1/4W	F
R462	1-247-879-11	CARBON	100K	5%	1/4W	
R463	1-247-871-11	CARBON	47K	5%	1/4W	
R464	1-247-879-11	CARBON	100K	5%	1/4W	
R465	1-247-871-11	CARBON	47K	5%	1/4W	
R466	1-247-871-11	CARBON	47K	5%	1/4W	
R467	1-247-843-11	CARBON	3.3K	5%	1/4W	
R468	1-247-843-11	CARBON	3.3K	5%	1/4W	

Ref. No.	Part No.	Description			Remark	
R469	1-247-839-11	CARBON	2.2K	5%	1/4W	
R470	1-247-839-11	CARBON	2.2K	5%	1/4W	
R471	1-247-871-11	CARBON	47K	5%	1/4W	
R472	1-247-871-11	CARBON	47K	5%	1/4W	
R473	1-247-835-11	CARBON	1.5K	5%	1/4W	
R474	1-247-835-11	CARBON	1.5K	5%	1/4W	
R475	1-247-855-11	CARBON	10K	5%	1/4W	
R476	1-247-855-11	CARBON	10K	5%	1/4W	
R477	1-247-839-11	CARBON	2.2K	5%	1/4W	
R478	1-247-839-11	CARBON	2.2K	5%	1/4W	
R479	1-247-704-11	CARBON	220	5%	1/4W	F
R480	1-247-710-11	CARBON	560	5%	1/4W	F
R493	1-247-903-00	CARBON	1M	5%	1/4W	
R494	1-247-903-00	CARBON	1M	5%	1/4W	
R495	1-247-847-11	CARBON	4.7K	5%	1/4W	
R496	1-247-847-11	CARBON	4.7K	5%	1/4W	
R497	1-247-708-11	CARBON	470	5%	1/4W	F
R499	1-247-855-11	CARBON	10K	5%	1/4W	
R500	1-247-807-11	CARBON	100	5%	1/4W	
R501	1-249-438-11	CARBON	56K	5%	1/4W	
R502	1-249-466-11	CARBON	56K	5%	1/4W	
R503	1-247-841-11	CARBON	2.7K	5%	1/4W	
R504	1-247-841-11	CARBON	2.7K	5%	1/4W	
R505	1-249-438-11	CARBON	56K	5%	1/4W	
R506	1-249-438-11	CARBON	56K	5%	1/4W	
R507	1-249-482-11	CARBON	4.7	5%	1/2W	
R508	1-249-482-11	CARBON	4.7	5%	1/2W	
R509	1-249-405-11	CARBON	100	5%	1/4W	F
R510	1-247-855-11	CARBON	10K	5%	1/4W	
R511	1-247-855-11	CARBON	10K	5%	1/4W	
R512	1-247-855-11	CARBON	10K	5%	1/4W	
R513	1-249-431-11	CARBON	15K	5%	1/4W	
R514	1-249-417-11	CARBON	1K	5%	1/4W	F
R515	1-249-417-11	CARBON	1K	5%	1/4W	F
R521	1-249-482-11	CARBON	4.7	5%	1/2W	
R522	1-249-482-11	CARBON	4.7	5%	1/2W	
R523	1-247-727-11	CARBON	10	5%	1/2W	
R524	1-247-727-11	CARBON	10	5%	1/2W	
⚠R525	1-216-429-11	METAL OXIDE	270	5%	1W	F
⚠R526	1-216-429-11	METAL OXIDE	270	5%	1W	F
R527	1-247-737-11	CARBON	68	5%	1/2W	F
R528	1-247-737-11	CARBON	68	5%	1/2W	F
⚠R551	1-208-601-11	WIREWOUND	0.1	10%	2W	F
⚠R552	1-208-601-11	WIREWOUND	0.1	10%	2W	F
R553	1-247-879-11	CARBON	100K	5%	1/4W	
R554	1-247-879-11	CARBON	100K	5%	1/4W	
R555	1-247-839-11	CARBON	2.2K	5%	1/4W	
R556	1-247-839-11	CARBON	2.2K	5%	1/4W	
R557	1-249-431-11	CARBON	15K	5%	1/4W	
R558	1-249-431-11	CARBON	15K	5%	1/4W	
R559	1-247-839-11	CARBON	2.2K	5%	1/4W	
R560	1-249-430-11	CARBON	12K	5%	1/4W	
R561	1-249-430-11	CARBON	12K	5%	1/4W	
R562	1-247-871-11	CARBON	47K	5%	1/4W	
R563	1-247-855-11	CARBON	10K	5%	1/4W	
R564	1-247-879-11	CARBON	100K	5%	1/4W	
R565	1-247-847-11	CARBON	4.7K	5%	1/4W	
R566	1-247-713-11	CARBON	1K	5%	1/4W	F

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark	
R567	1-249-438-11	CARBON	56K	5%	1/4W	
R581	1-247-843-11	CARBON	3.3K	5%	1/4W	
R582	1-247-843-11	CARBON	3.3K	5%	1/4W	
R583	1-249-439-11	CARBON	68K	5%	1/4W	
R584	1-247-847-11	CARBON	4.7K	5%	1/4W	
R585	1-247-839-11	CARBON	2.2K	5%	1/4W	
R586	1-249-431-11	CARBON	15K	5%	1/4W	
R587	1-249-432-11	CARBON	18K	5%	1/4W	
R588	1-249-438-11	CARBON	56K	5%	1/4W	
R589	1-249-434-11	CARBON	27K	5%	1/4W	
R590	1-249-431-11	CARBON	15K	5%	1/4W	
R591	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R592	1-247-879-11	CARBON	100K	5%	1/4W	
R593	1-247-843-11	CARBON	3.3K	5%	1/4W	
R594	1-247-843-11	CARBON	3.3K	5%	1/4W	
R595	1-247-879-11	CARBON	100K	5%	1/4W	
⚠R701	1-216-349-00	METAL OXIDE	1	5%	1W	F
R702	1-247-706-11	CARBON	330	5%	1/4W	F
R703	1-247-713-11	CARBON	1K	5%	1/4W	F
R704	1-247-708-11	CARBON	470	5%	1/4W	F
R705	1-247-706-11	CARBON	330	5%	1/4W	F
⚠R706	1-216-349-00	METAL OXIDE	1	5%	1W	F
R707	1-247-711-11	CARBON	680	5%	1/4W	F
R708	1-247-855-11	CARBON	10K	5%	1/4W	
R709	1-247-855-11	CARBON	10K	5%	1/4W	
R710	1-249-427-11	CARBON	6.8K	5%	1/4W	F
⚠R741	1-215-892-11	METAL OXIDE	1K	5%	2W	F
R751	1-247-855-11	CARBON	10K	5%	1/4W	
R752	1-247-867-11	CARBON	33K	5%	1/4W	
R781	1-247-855-11	CARBON	10K	5%	1/4W	
R782	1-247-855-11	CARBON	10K	5%	1/4W	
		< RELAY >				
RL501	1-515-921-11	RELAY (12V)				
		< VARIABLE RESISTOR >				
SFR201	1-228-994-00	RES, ADJ, METAL 10K				
		< SWITCH >				
SW751	1-762-735-11	SWITCH, SLIDE (AM TUNING STEP)(E,AR)				

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*	A-4403-155-A	MAIN BOARD, COMPLETE (AEP,UK) *********************			

Ref. No.	Part No.	Description			Remark
	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT			
		< CAPACITOR >			
C201	1-162-286-31	CERAMIC	220PF	10%	50V
C202	1-162-286-31	CERAMIC	220PF	10%	50V
C203	1-162-292-31	CERAMIC	680PF	10%	50V
C204	1-162-292-31	CERAMIC	680PF	10%	50V
C205	1-162-286-31	CERAMIC	220PF	10%	50V
C206	1-162-286-31	CERAMIC	220PF	10%	50V
C207	1-124-907-11	ELECT	10uF	20%	50V
C208	1-124-907-11	ELECT	10uF	20%	50V
C209	1-130-485-00	MYLAR	0.015uF	5%	50V
C210	1-130-485-00	MYLAR	0.015uF	5%	50V
C211	1-124-903-11	ELECT	1uF	20%	50V
C212	1-124-903-11	ELECT	1uF	20%	50V
C213	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C214	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C215	1-164-086-11	CERAMIC	0.0012uF	20%	50V
C216	1-164-086-11	CERAMIC	0.0012uF	20%	50V
C217	1-162-286-31	CERAMIC	220PF	10%	50V
C218	1-162-286-31	CERAMIC	220PF	10%	50V
C219	1-126-962-11	ELECT	3.3uF	20%	50V
C220	1-126-962-11	ELECT	3.3uF	20%	50V
C221	1-104-665-11	ELECT	100uF	20%	16V
C222	1-104-665-11	ELECT	100uF	20%	16V
C223	1-162-294-31	CERAMIC	0.001uF	10%	50V
C224	1-162-294-31	CERAMIC	0.001uF	10%	50V
C225	1-126-962-11	ELECT	3.3uF	20%	50V
C226	1-126-962-11	ELECT	3.3uF	20%	50V
C228	1-124-907-11	ELECT	10uF	20%	50V
C230	1-130-485-00	MYLAR	0.015uF	5%	50V
C231	1-130-483-00	MYLAR	0.01uF	5%	50V
C232	1-130-479-00	MYLAR	0.0047uF	5%	50V
C233	1-130-487-00	MYLAR	0.022uF	5%	50V
C234	1-104-664-11	ELECT	47uF	20%	25V
C235	1-161-494-00	CERAMIC	0.022uF		25V
C237	1-124-119-00	ELECT	330uF	20%	16V
C238	1-126-962-11	ELECT	3.3uF	20%	50V
C239	1-162-292-31	CERAMIC	680PF	10%	50V
C240	1-162-292-31	CERAMIC	680PF	10%	50V
C241	1-104-665-11	ELECT	100uF	20%	16V
C242	1-126-959-11	ELECT	0.47uF	20%	50V
C243	1-126-961-11	ELECT	2.2uF	20%	50V
C301	1-130-495-11	MYLAR	0.1uF	5%	50V
C302	1-130-495-11	MYLAR	0.1uF	5%	50V
C303	1-130-495-11	MYLAR	0.1uF	5%	50V
C304	1-130-495-11	MYLAR	0.1uF	5%	50V
C305	1-126-972-11	ELECT	1000uF	20%	50V
C306	1-126-972-11	ELECT	1000uF	20%	50V
C307	1-104-664-11	ELECT	47uF	20%	25V
C308	1-104-664-11	ELECT	47uF	20%	25V
C309	1-104-666-11	ELECT	220uF	20%	16V
C310	1-104-666-11	ELECT	220uF	20%	16V
C311	1-124-572-11	ELECT	100uF	20%	63V
C312	1-162-294-31	CERAMIC	0.001uF	10%	50V
C313	1-162-294-31	CERAMIC	0.001uF	10%	50V
C314	1-124-903-11	ELECT	1uF	20%	50V
C315	1-124-903-11	ELECT	1uF	20%	50V
C316	1-104-664-11	ELECT	47uF	20%	25V
C317	1-124-572-11	ELECT	100uF	20%	63V
C318	1-162-290-31	CERAMIC	470PF	10%	50V
C319	1-162-290-31	CERAMIC	470PF	10%	50V
C320	1-124-903-11	ELECT	1uF	20%	50V
C321	1-124-903-11	ELECT	1uF	20%	50V
C322	1-124-907-11	ELECT	10uF	20%	50V
C323	1-124-907-11	ELECT	10uF	20%	50V
C324	1-124-907-11	ELECT	10uF	20%	50V
C325	1-164-159-11	CERAMIC	0.1uF		50V
C326	1-164-159-11	CERAMIC	0.1uF		50V

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MAIN

Ref. No.	Part No.	Description			Remark
C327	1-124-907-11	ELECT	10uF	20%	50V
C328	1-124-480-11	ELECT	470uF	20%	25V
C329	1-124-907-11	ELECT	10uF	20%	50V
C330	1-124-907-11	ELECT	10uF	20%	50V
C331	1-126-959-11	ELECT	0.47uF	20%	50V
C332	1-126-959-11	ELECT	0.47uF	20%	50V
C333	1-104-665-11	ELECT	100uF	20%	16V
C334	1-126-959-11	ELECT	0.47uF	20%	50V
C335	1-126-959-11	ELECT	0.47uF	20%	50V
C338	1-162-215-31	CERAMIC	47PF	5%	50V
C339	1-162-215-31	CERAMIC	47PF	5%	50V
C340	1-162-282-31	CERAMIC	100PF	10%	50V
C341	1-162-282-31	CERAMIC	100PF	10%	50V
C342	1-104-665-11	ELECT	100uF	20%	16V
C343	1-162-199-31	CERAMIC	10PF	5%	50V
C344	1-162-199-31	CERAMIC	10PF	5%	50V
C345	1-104-666-11	ELECT	220uF	20%	16V
C348	1-104-666-11	ELECT	220uF	20%	16V
C349	1-162-290-31	CERAMIC	470PF	10%	50V
C350	1-162-290-31	CERAMIC	470PF	10%	50V
C351	1-126-963-11	ELECT	4.7uF	20%	50V
C352	1-126-963-11	ELECT	4.7uF	20%	50V
C353	1-126-959-11	ELECT	0.47uF	20%	50V
C354	1-126-959-11	ELECT	0.47uF	20%	50V
C355	1-126-959-11	ELECT	0.47uF	20%	50V
C356	1-126-959-11	ELECT	0.47uF	20%	50V
C357	1-104-666-11	ELECT	220uF	20%	16V
C359	1-126-961-11	ELECT	2.2uF	20%	50V
C360	1-117-750-11	ELECT	3300uF	20%	63V
C361	1-137-150-00	MYLAR	0.01uF	5%	100V
C362	1-137-150-00	MYLAR	0.01uF	5%	100V
C363	1-162-290-31	CERAMIC	470PF	10%	50V
C364	1-162-290-31	CERAMIC	470PF	10%	50V
C365	1-130-485-00	MYLAR	0.015uF	5%	50V
C366	1-130-485-00	MYLAR	0.015uF	5%	50V
C367	1-162-292-31	CERAMIC	680PF	10%	50V
C368	1-162-292-31	CERAMIC	680PF	10%	50V
C369	1-161-494-00	CERAMIC	0.022uF		25V
C370	1-161-494-00	CERAMIC	0.022uF		25V
C371	1-124-636-00	ELECT	3300uF	20%	25V
C372	1-104-665-11	ELECT	100uF	20%	16V
C373	1-161-494-00	CERAMIC	0.022uF		25V
C374	1-161-494-00	CERAMIC	0.022uF		25V
C375	1-161-494-00	CERAMIC	0.022uF		25V
C376	1-126-941-11	ELECT	470uF	20%	16V
C377	1-161-494-00	CERAMIC	0.022uF		25V
C378	1-161-494-00	CERAMIC	0.022uF		25V
C379	1-104-665-11	ELECT	100uF	20%	16V
C380	1-161-494-00	CERAMIC	0.022uF		25V
C381	1-126-941-11	ELECT	470uF	20%	16V
C382	1-124-480-11	ELECT	470uF	20%	25V
C383	1-161-494-00	CERAMIC	0.022uF		25V
C384	1-161-494-00	CERAMIC	0.022uF		25V
C385	1-126-941-11	ELECT	470uF	20%	16V
C386	1-161-494-00	CERAMIC	0.022uF		25V
C387	1-126-941-11	ELECT	470uF	20%	16V
C388	1-162-284-31	CERAMIC	150PF	10%	50V
C389	1-162-284-31	CERAMIC	150PF	10%	50V
C390	1-130-486-00	MYLAR	0.018uF	10%	50V
C391	1-130-486-00	MYLAR	0.018uF	10%	50V
C393	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C394	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C395	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C396	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C397	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C398	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C399	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C400	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C402	1-130-471-00	MYLAR	0.001uF	5%	50V
C403	1-162-288-31	CERAMIC	330PF	10%	50V
C404	1-162-288-31	CERAMIC	330PF	10%	50V
C405	1-104-664-11	ELECT	47uF	20%	25V
C406	1-104-665-11	ELECT	100uF	20%	16V
C407	1-162-290-31	CERAMIC	470PF	10%	50V
C408	1-162-290-31	CERAMIC	470PF	10%	50V
C409	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C410	1-162-600-11	CERAMIC	0.0047uF	30%	16V
C411	1-162-294-31	CERAMIC	0.001uF	10%	50V
C412	1-162-294-31	CERAMIC	0.001uF	10%	50V
C413	1-162-286-31	CERAMIC	220PF	10%	50V
C414	1-130-482-00	MYLAR	0.0082uF	5%	50V
C415	1-130-482-00	MYLAR	0.0082uF	5%	50V
C416	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C417	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C419	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C420	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C421	1-124-907-11	ELECT	10uF	20%	50V
C422	1-124-907-11	ELECT	10uF	20%	50V
C424	1-126-963-11	ELECT	4.7uF	20%	50V
C425	1-126-963-11	ELECT	4.7uF	20%	50V
C426	1-162-290-31	CERAMIC	470PF	10%	50V
C427	1-162-290-31	CERAMIC	470PF	10%	50V
C428	1-162-282-31	CERAMIC	100PF	10%	50V
C429	1-162-282-31	CERAMIC	100PF	10%	50V
C430	1-126-959-11	ELECT	0.47uF	20%	50V
C431	1-126-959-11	ELECT	0.47uF	20%	50V
C432	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C433	1-162-302-11	CERAMIC	0.0022uF	30%	16V
C434	1-164-159-11	CERAMIC	0.1uF		50V
C435	1-162-292-31	CERAMIC	680PF	10%	50V
C436	1-162-292-31	CERAMIC	680PF	10%	50V
C437	1-104-665-11	ELECT	100uF	20%	16V
C438	1-104-666-11	ELECT	220uF	20%	16V
C439	1-104-665-11	ELECT	100uF	20%	16V
C442	1-104-665-11	ELECT	100uF	20%	16V
C443	1-104-665-11	ELECT	100uF	20%	16V
C444	1-104-665-11	ELECT	100uF	20%	16V
C445	1-161-494-00	CERAMIC	0.022uF		25V
C446	1-161-494-00	CERAMIC	0.022uF		25V
C447	1-161-494-00	CERAMIC	0.022uF		25V
C448	1-126-959-11	ELECT	0.47uF	20%	50V
C449	1-126-959-11	ELECT	0.47uF	20%	50V
C450	1-126-959-11	ELECT	0.47uF	20%	50V
C451	1-126-959-11	ELECT	0.47uF	20%	50V
C452	1-124-907-11	ELECT	10uF	20%	50V

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
* CN08	1-568-272-11	SOCKET, CONNECTOR 6P	
* CN101	1-779-767-11	PIN, CONNECTOR	
* CN201	1-564-705-11	PIN, CONNECTOR (SMALL TYPE) 3P	
CN202	1-564-707-11	PIN, CONNECTOR (SMALL TYPE) 5P	
* CN203	1-564-704-11	PIN, CONNECTOR (SMALL TYPE) 2P	
* CN205	1-568-274-11	SOCKET, CONNECTOR 8P	
* CN301	1-770-334-11	PIN, CONNECTOR (PC BOARD) 17P	
* CN401	1-564-507-11	PLUG, CONNECTOR 4P	
		< DIODE >	
D201	8-719-987-63	DIODE 1N4148M	
D202	8-719-987-63	DIODE 1N4148M	
D203	8-719-987-63	DIODE 1N4148M	
D205	8-719-987-63	DIODE 1N4148M	
D208	8-719-987-63	DIODE 1N4148M	
D209	8-719-987-63	DIODE 1N4148M	
D211	8-719-987-63	DIODE 1N4148M	
D212	8-719-987-63	DIODE 1N4148M	
D213	8-719-987-63	DIODE 1N4148M	
D301	8-719-109-93	DIODE RD6.2ESB2	
D302	8-719-987-63	DIODE 1N4148M	
D303	8-719-987-63	DIODE 1N4148M	
D304	8-719-987-63	DIODE 1N4148M	
D306	8-719-510-33	DIODE D2SBA20	
D310	8-719-904-02	DIODE 1N4002T	
D311	8-719-904-02	DIODE 1N4002T	
D312	8-719-904-02	DIODE 1N4002T	
D313	8-719-904-02	DIODE 1N4002T	
D314	8-719-110-08	DIODE RD8.2ES-B2	
D315	8-719-110-31	DIODE RD12ES-B2	
D316	8-719-110-31	DIODE RD12ES-B2	
D318	8-719-987-63	DIODE 1N4148M	
D319	8-719-987-63	DIODE 1N4148M	
D321	8-719-987-63	DIODE 1N4148M	
D322	8-719-987-63	DIODE 1N4148M	
D401	8-719-987-63	DIODE 1N4148M	
		< FUSE, FUSE HOLDER >	
⚠F301	1-532-504-31	FUSE (T4AL/250V)	
* F301HA	1-533-213-31	HOLDER, FUSE	
* F301HB	1-533-213-31	HOLDER, FUSE	
⚠F302	1-532-388-31	FUSE (T2AL/250V)	
* F302HA	1-533-213-31	HOLDER, FUSE	
* F302HB	1-533-213-31	HOLDER, FUSE	
		< IC >	
IC201	8-759-242-58	IC TA8189N	
IC301	8-749-920-14	IC STK-4412	
IC302	8-759-000-49	IC MC14066BCP	
IC303	8-759-473-59	IC LC75392	
IC304	8-759-634-51	IC M5218AP	
		< JACK >	
JK301	1-694-092-11	TERMINAL BOARD (SPEAKER)	
JK302	1-779-715-11	JACK (LARGE TYPE)(PHONES)	
JK502	1-750-679-21	JACK, PIN 2P (PHONO)	

Ref. No.	Part No.	Description	Remark
		< COIL >	
L201	1-429-552-11	TRANSFORMER, BIAS OSCILLATION	
L301	1-420-872-00	COIL, AIR	
L302	1-420-872-00	COIL, AIR	
		< TRANSISTOR >	
Q201	8-729-194-57	TRANSISTOR 2SC945-P	
Q202	8-729-194-57	TRANSISTOR 2SC945-P	
Q203	8-729-194-57	TRANSISTOR 2SC945-P	
Q204	8-729-194-57	TRANSISTOR 2SC945-P	
Q205	8-729-194-57	TRANSISTOR 2SC945-P	
Q206	8-729-194-57	TRANSISTOR 2SC945-P	
Q207	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q208	8-729-194-57	TRANSISTOR 2SC945-P	
Q209	8-729-194-57	TRANSISTOR 2SC945-P	
Q210	8-729-194-57	TRANSISTOR 2SC945-P	
Q211	8-729-194-57	TRANSISTOR 2SC945-P	
Q212	8-729-194-57	TRANSISTOR 2SC945-P	
Q213	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q214	8-729-194-57	TRANSISTOR 2SC945-P	
Q216	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q217	8-729-194-57	TRANSISTOR 2SC945-P	
Q218	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q219	8-729-194-57	TRANSISTOR 2SC945-P	
Q220	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q301	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q302	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q303	8-729-231-55	TRANSISTOR 2SC2878-AB	
Q305	8-729-194-57	TRANSISTOR 2SC945-P	
Q306	8-729-194-57	TRANSISTOR 2SC945-P	
Q307	8-729-194-57	TRANSISTOR 2SC945-P	
Q308	8-729-194-57	TRANSISTOR 2SC945-P	
Q309	8-729-194-57	TRANSISTOR 2SC945-P	
Q311	8-729-194-57	TRANSISTOR 2SC945-P	
Q312	8-729-194-57	TRANSISTOR 2SC945-P	
Q313	8-729-194-57	TRANSISTOR 2SC945-P	
Q315	8-729-188-23	TRANSISTOR 2SD882-P	
Q316	8-729-188-23	TRANSISTOR 2SD882-P	
Q317	8-729-188-23	TRANSISTOR 2SD882-P	
Q319	8-729-194-57	TRANSISTOR 2SC945-P	
Q320	8-729-194-57	TRANSISTOR 2SC945-P	
Q321	8-729-142-46	TRANSISTOR 2SC2001-LK	
Q401	8-729-194-57	TRANSISTOR 2SC945-P	
Q402	8-729-194-57	TRANSISTOR 2SC945-P	
		< RESISTOR >	
R201	1-249-393-11	CARBON 10 5% 1/4W	F
R202	1-249-393-11	CARBON 10 5% 1/4W	F
R203	1-247-889-00	CARBON 270K 5% 1/4W	
R204	1-247-889-00	CARBON 270K 5% 1/4W	
R205	1-249-407-11	CARBON 150 5% 1/4W	F
R205A	1-247-827-11	CARBON 680 5% 1/4W	
R206	1-249-407-11	CARBON 150 5% 1/4W	F
R206A	1-247-827-11	CARBON 680 5% 1/4W	
R207	1-249-431-11	CARBON 15K 5% 1/4W	
R208	1-249-431-11	CARBON 15K 5% 1/4W	
R209	1-247-855-11	CARBON 10K 5% 1/4W	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MAIN

Ref. No.	Part No.	Description			Remark
R210	1-247-863-11	CARBON	22K	5%	1/4W
R211	1-247-891-00	CARBON	330K	5%	1/4W
R212	1-247-891-00	CARBON	330K	5%	1/4W
R213	1-247-847-11	CARBON	4.7K	5%	1/4W
R214	1-247-847-11	CARBON	4.7K	5%	1/4W
R215	1-247-855-11	CARBON	10K	5%	1/4W
R216	1-249-431-11	CARBON	15K	5%	1/4W
R217	1-249-465-11	CARBON	47K	5%	1/4W
R218	1-247-704-11	CARBON	220	5%	1/4W F
R219	1-247-841-11	CARBON	2.7K	5%	1/4W
R220	1-249-434-11	CARBON	27K	5%	1/4W
R221	1-247-879-11	CARBON	100K	5%	1/4W
R222	1-247-879-11	CARBON	100K	5%	1/4W
R223	1-247-855-11	CARBON	10K	5%	1/4W
R224	1-247-855-11	CARBON	10K	5%	1/4W
R225	1-247-863-11	CARBON	22K	5%	1/4W
R226	1-247-863-11	CARBON	22K	5%	1/4W
R227	1-247-885-00	CARBON	180K	5%	1/4W
R228	1-247-885-00	CARBON	180K	5%	1/4W
R229	1-247-881-11	CARBON	120K	5%	1/4W
R230	1-247-881-11	CARBON	120K	5%	1/4W
R231	1-249-420-11	CARBON	1.8K	5%	1/4W F
R232	1-249-420-11	CARBON	1.8K	5%	1/4W F
R233	1-247-839-11	CARBON	2.2K	5%	1/4W
R234	1-247-839-11	CARBON	2.2K	5%	1/4W
R235	1-247-855-11	CARBON	10K	5%	1/4W
R236	1-247-855-11	CARBON	10K	5%	1/4W
R237	1-247-887-00	CARBON	220K	5%	1/4W
R238	1-247-843-11	CARBON	3.3K	5%	1/4W
R239	1-247-855-11	CARBON	10K	5%	1/4W
R240	1-249-393-11	CARBON	10	5%	1/4W F
R241	1-249-434-11	CARBON	27K	5%	1/4W
R242	1-247-708-11	CARBON	470	5%	1/4W F
R243	1-247-855-11	CARBON	10K	5%	1/4W
R244	1-247-855-11	CARBON	10K	5%	1/4W
R245	1-249-393-11	CARBON	10	5%	1/4W F
R246	1-249-393-11	CARBON	10	5%	1/4W F
R247	1-247-855-11	CARBON	10K	5%	1/4W
R248	1-249-434-11	CARBON	27K	5%	1/4W
R249	1-249-381-11	CARBON	1	5%	1/4W F
R250	1-247-847-11	CARBON	4.7K	5%	1/4W
R251	1-247-847-11	CARBON	4.7K	5%	1/4W
R252	1-247-871-11	CARBON	47K	5%	1/4W
R253	1-247-871-11	CARBON	47K	5%	1/4W
R256	1-247-871-11	CARBON	47K	5%	1/4W
R257	1-247-839-11	CARBON	2.2K	5%	1/4W
R258	1-247-871-11	CARBON	47K	5%	1/4W
R259	1-247-871-11	CARBON	47K	5%	1/4W
R260	1-247-855-11	CARBON	10K	5%	1/4W
R261	1-249-424-11	CARBON	3.9K	5%	1/4W F
R262	1-247-839-11	CARBON	2.2K	5%	1/4W
R263	1-249-417-11	CARBON	1K	5%	1/4W F
R264	1-247-839-11	CARBON	2.2K	5%	1/4W
R265	1-247-847-11	CARBON	4.7K	5%	1/4W
R266	1-249-417-11	CARBON	1K	5%	1/4W F
R267	1-247-839-11	CARBON	2.2K	5%	1/4W
R301	1-260-072-11	CARBON	4.7	5%	1/2W
R302	1-260-072-11	CARBON	4.7	5%	1/2W

Ref. No.	Part No.	Description			Remark
⚠R303	1-212-879-11	FUSIBLE	82	5%	1/4W F
⚠R304	1-212-879-11	FUSIBLE	82	5%	1/4W F
R305	1-249-459-11	CARBON	12K	5%	1/4W
R306	1-249-459-11	CARBON	12K	5%	1/4W
R307	1-260-087-11	CARBON	100	5%	1/2W
R308	1-247-879-11	CARBON	100K	5%	1/4W
R309	1-247-879-11	CARBON	100K	5%	1/4W
R310	1-247-879-11	CARBON	100K	5%	1/4W
R311	1-247-889-00	CARBON	270K	5%	1/4W
R312	1-247-879-11	CARBON	100K	5%	1/4W
R313	1-247-879-11	CARBON	100K	5%	1/4W
R314	1-247-879-11	CARBON	100K	5%	1/4W
R315	1-247-879-11	CARBON	100K	5%	1/4W
R316	1-247-879-11	CARBON	100K	5%	1/4W
R317	1-247-879-11	CARBON	100K	5%	1/4W
R318	1-247-847-11	CARBON	4.7K	5%	1/4W
R319	1-247-847-11	CARBON	4.7K	5%	1/4W
R320	1-247-863-11	CARBON	22K	5%	1/4W
R321	1-247-839-11	CARBON	2.2K	5%	1/4W
R322	1-247-839-11	CARBON	2.2K	5%	1/4W
R323	1-247-713-11	CARBON	1K	5%	1/4W F
R324	1-247-713-11	CARBON	1K	5%	1/4W F
R325	1-247-871-11	CARBON	47K	5%	1/4W
R326	1-247-871-11	CARBON	47K	5%	1/4W
R327	1-249-424-11	CARBON	3.9K	5%	1/4W F
R328	1-249-424-11	CARBON	3.9K	5%	1/4W F
R329	1-249-427-11	CARBON	6.8K	5%	1/4W F
R330	1-249-427-11	CARBON	6.8K	5%	1/4W F
R331	1-249-417-11	CARBON	1K	5%	1/4W F
R332	1-249-417-11	CARBON	1K	5%	1/4W F
R333	1-247-903-00	CARBON	1M	5%	1/4W
R334	1-247-903-00	CARBON	1M	5%	1/4W
R335	1-247-708-11	CARBON	470	5%	1/4W F
R336	1-247-879-11	CARBON	100K	5%	1/4W
R337	1-247-855-11	CARBON	10K	5%	1/4W
R338	1-247-879-11	CARBON	100K	5%	1/4W
R339	1-247-839-11	CARBON	2.2K	5%	1/4W
R340	1-247-717-11	CARBON	2.2K	5%	1/4W F
R341	1-247-847-11	CARBON	4.7K	5%	1/4W
R342	1-247-847-11	CARBON	4.7K	5%	1/4W
R343	1-247-903-00	CARBON	1M	5%	1/4W
R344	1-247-903-00	CARBON	1M	5%	1/4W
R347	1-247-855-11	CARBON	10K	5%	1/4W
R348	1-247-847-11	CARBON	4.7K	5%	1/4W
R350	1-247-839-11	CARBON	2.2K	5%	1/4W
R351	1-247-839-11	CARBON	2.2K	5%	1/4W
R352	1-247-839-11	CARBON	2.2K	5%	1/4W
R353	1-247-704-11	CARBON	220	5%	1/4W F
R355	1-247-708-11	CARBON	470	5%	1/4W F
R356	1-247-867-11	CARBON	33K	5%	1/4W
R357	1-247-867-11	CARBON	33K	5%	1/4W
R358	1-247-879-11	CARBON	100K	5%	1/4W
R359	1-247-879-11	CARBON	100K	5%	1/4W
R360	1-249-440-11	CARBON	82K	5%	1/4W
R361	1-249-440-11	CARBON	82K	5%	1/4W
R362	1-247-847-11	CARBON	4.7K	5%	1/4W
R363	1-247-847-11	CARBON	4.7K	5%	1/4W

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Ref. No.	Part No.	Description			Remark
R364	1-247-883-00	CARBON	150K	5%	1/4W
R365	1-247-883-00	CARBON	150K	5%	1/4W
R366	1-247-863-11	CARBON	22K	5%	1/4W
R367	1-247-863-11	CARBON	22K	5%	1/4W
R368	1-247-871-11	CARBON	47K	5%	1/4W
R369	1-247-871-11	CARBON	47K	5%	1/4W
R370	1-247-887-00	CARBON	220K	5%	1/4W
R371	1-247-887-00	CARBON	220K	5%	1/4W
R372	1-249-417-11	CARBON	1K	5%	1/4W F
R373	1-247-843-11	CARBON	3.3K	5%	1/4W
R374	1-247-721-11	CARBON	4.7K	5%	1/4W F
R375	1-247-855-11	CARBON	10K	5%	1/4W
R376	1-249-430-11	CARBON	12K	5%	1/4W
R377	1-247-855-11	CARBON	10K	5%	1/4W
R378	1-247-855-11	CARBON	10K	5%	1/4W
R379	1-247-855-11	CARBON	10K	5%	1/4W
R380	1-247-855-11	CARBON	10K	5%	1/4W
⚠R381	1-208-601-11	WIREWOUND	0.1	10%	2W F
R382	1-246-461-15	CARBON	330	5%	1/4W
R383	1-247-708-11	CARBON	470	5%	1/4W F
R384	1-247-711-11	CARBON	680	5%	1/4W F
R385	1-249-417-11	CARBON	1K	5%	1/4W F
R386	1-260-094-11	CARBON	390	5%	1/2W
R387	1-260-094-11	CARBON	390	5%	1/2W
R388	1-249-431-11	CARBON	15K	5%	1/4W
⚠R389	1-208-601-11	WIREWOUND	0.1	10%	2W F
R390	1-247-708-11	CARBON	470	5%	1/4W F
R391	1-249-434-11	CARBON	27K	5%	1/4W
R392	1-249-434-11	CARBON	27K	5%	1/4W
R393	1-249-430-11	CARBON	12K	5%	1/4W
R394	1-249-430-11	CARBON	12K	5%	1/4W
R395	1-247-843-11	CARBON	3.3K	5%	1/4W
R396	1-247-719-11	CARBON	3.3K	5%	1/4W F
R397	1-249-434-11	CARBON	27K	5%	1/4W
R398	1-249-434-11	CARBON	27K	5%	1/4W
R399	1-247-867-11	CARBON	33K	5%	1/4W
R400	1-247-867-11	CARBON	33K	5%	1/4W
R401	1-249-427-11	CARBON	6.8K	5%	1/4W F
R402	1-249-427-11	CARBON	6.8K	5%	1/4W F
R403	1-249-430-11	CARBON	12K	5%	1/4W
R404	1-249-430-11	CARBON	12K	5%	1/4W
R405	1-249-417-11	CARBON	1K	5%	1/4W F
R406	1-249-417-11	CARBON	1K	5%	1/4W F
R407	1-247-843-11	CARBON	3.3K	5%	1/4W
R408	1-247-843-11	CARBON	3.3K	5%	1/4W
R409	1-247-879-11	CARBON	100K	5%	1/4W
R410	1-247-879-11	CARBON	100K	5%	1/4W
R412	1-247-855-11	CARBON	10K	5%	1/4W
R413	1-247-855-11	CARBON	10K	5%	1/4W
R414	1-247-893-11	CARBON	390K	5%	1/4W
R415	1-247-893-11	CARBON	390K	5%	1/4W
R416	1-247-867-11	CARBON	33K	5%	1/4W
R417	1-247-867-11	CARBON	33K	5%	1/4W
R418	1-249-418-11	CARBON	1.2K	5%	1/4W F
R419	1-249-418-11	CARBON	1.2K	5%	1/4W F
R420	1-247-879-11	CARBON	100K	5%	1/4W
R421	1-247-879-11	CARBON	100K	5%	1/4W
R422	1-247-855-11	CARBON	10K	5%	1/4W
R423	1-247-855-11	CARBON	10K	5%	1/4W
R424	1-249-417-11	CARBON	1K	5%	1/4W F
R425	1-249-417-11	CARBON	1K	5%	1/4W F
R426	1-249-417-11	CARBON	1K	5%	1/4W F
R427	1-249-417-11	CARBON	1K	5%	1/4W F
R430	1-247-867-11	CARBON	33K	5%	1/4W
R432	1-247-855-11	CARBON	10K	5%	1/4W
R433	1-247-871-11	CARBON	47K	5%	1/4W
R434	1-247-855-11	CARBON	10K	5%	1/4W
R435	1-246-461-15	CARBON	330	5%	1/4W
R436	1-247-871-11	CARBON	47K	5%	1/4W
R437	1-247-871-11	CARBON	47K	5%	1/4W
R438	1-247-871-11	CARBON	47K	5%	1/4W
R439	1-247-871-11	CARBON	47K	5%	1/4W
R440	1-247-871-11	CARBON	47K	5%	1/4W
R441	1-247-871-11	CARBON	47K	5%	1/4W
R442	1-247-871-11	CARBON	47K	5%	1/4W
R443	1-247-871-11	CARBON	47K	5%	1/4W
R450	1-247-871-11	CARBON	47K	5%	1/4W
R451	1-247-871-11	CARBON	47K	5%	1/4W
R452	1-249-417-11	CARBON	1K	5%	1/4W F

< RELAY >

RY301	1-515-921-11	RELAY (12V)

< VARIABLE RESISTOR >

SFR201	1-228-994-00	RES, ADJ, METAL 10K

****

* 1-666-451-11 MOTOR BOARD

****

< CAPACITOR >

C01	1-126-963-11	ELECT	4.7uF	20%	50V

< CONNECTOR >

* CN06	1-568-824-11	SOCKET, CONNECTOR 5P

< MOTOR >

M103	X-4948-765-1	MOTOR ASSY (TURN TABLE)

****

* 1-639-678-12 MOTOR (6P) (S) BOARD

****

< CONNECTOR >

CN1	1-564-722-11	PIN, CONNECTOR (SMALL TYPE) 6P

< MOTOR >

M101	X-2625-877-1	MOTOR ASSY (SPINDLE)
M102	X-2625-769-1	MOTOR ASSY (SLED)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

MOTOR (6P) (S) O/C PANEL

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S1	1-572-085-11	SWITCH, LEAF (LIMIT)	

****

Ref. No.	Part No.	Description	Remark
*	1-666-439-11	O/C BOARD *********	
		< SWITCH >	
S623	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(⏏ OPEN/CLOSE)	
S627	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DISC SKIP)	

****

Ref. No.	Part No.	Description	Remark
*	A-4398-918-A	PANEL BOARD, COMPLETE (MX) ********************	
*	A-4403-221-A	PANEL BOARD, COMPLETE (E,AR) ********************	
*	A-4403-354-A	PANEL BOARD, COMPLETE (AEP,UK) ********************	
	4-992-826-01	PLATE, DISPLAY	
	4-992-827-01	HOLDER, DISPLAY	
	4-993-057-01	HOLDER, LED	
		< CAPACITOR >	
C601	1-164-159-11	CERAMIC 0.1uF 50V	
C603	1-124-471-00	ELECT 1000uF 20% 6.3V	
C604	1-161-494-00	CERAMIC 0.022uF 25V	
C607	1-126-022-11	ELECT 47uF 20% 16V	
C608	1-164-159-11	CERAMIC 0.1uF 50V	
C609	1-126-045-11	ELECT 2.2uF 20% 50V	
C610	1-126-044-11	ELECT 1uF 20% 50V	
C611	1-164-159-11	CERAMIC 0.1uF 50V	
C612	1-126-964-11	ELECT 10uF 20% 50V	
C613	1-161-494-00	CERAMIC 0.022uF 25V	
C614	1-126-044-11	ELECT 1uF 20% 50V	
C615	1-162-282-31	CERAMIC 100PF 10% 50V	
C616	1-161-494-00	CERAMIC 0.022uF 25V	
C617	1-162-202-31	CERAMIC 13PF 5% 50V	
C618	1-162-202-31	CERAMIC 13PF 5% 50V	
C619	1-161-494-00	CERAMIC 0.022uF 25V	
C620	1-164-159-11	CERAMIC 0.1uF 50V	
C621	1-104-665-11	ELECT 100uF 20% 16V	
C622	1-104-665-11	ELECT 100uF 20% 16V	
C623	1-104-665-11	ELECT 100uF 20% 16V	
C624	1-162-306-11	CERAMIC 0.01uF 20% 16V	
C628	1-162-286-31	CERAMIC 220PF 10% 50V	
		< CONNECTOR >	
* CN301	1-770-332-11	HOUSING, CONNECTOR (PC BOARD) 17P	
CN601	1-568-838-11	SOCKET, CONNECTOR 21P	
		< DIODE >	
D601	8-719-987-63	DIODE 1N4148M	
D602	8-719-987-63	DIODE 1N4148M	
D603	8-719-987-63	DIODE 1N4148M	
D604	8-719-987-63	DIODE 1N4148M	
D608	8-719-911-19	DIODE 1SS119 (MX)	
D609	8-719-987-63	DIODE 1N4148M (EXCEPT MX)	
D610	8-719-987-63	DIODE 1N4148M	
D611	8-719-987-63	DIODE 1N4148M	
D612	8-719-987-63	DIODE 1N4148M	
D613	8-719-987-63	DIODE 1N4148M	
D614	8-719-987-63	DIODE 1N4148M	
D615	8-719-987-63	DIODE 1N4148M	
D616	8-719-987-63	DIODE 1N4148M	
D617	8-719-987-63	DIODE 1N4148M	
D619	8-719-987-63	DIODE 1N4148M	
D620	8-719-987-63	DIODE 1N4148M (MX)	
D622	8-719-987-63	DIODE 1N4148M	
		< IC >	
IC601	8-759-473-58	IC uPD753017AGC-E02-3B9	
IC602	8-759-241-12	IC TC74HC237AP	
IC603	8-759-473-61	IC BU2114	
		< COIL >	
L601	1-408-096-00	INDUCTOR 470uH	
L602	1-412-507-11	INDUCTOR 47uH	
L603	1-412-507-11	INDUCTOR 47uH	
		< LIQUID CRYSTAL DISPLAY >	
LCD601	1-801-841-11	DISPLAY PANEL, LIQUID CRYSTAL	
		< DIODE >	
LED601	8-719-300-79	DIODE SEL1213C (DBFB)	
		< LAMP >	
LP601	1-518-527-51	LAMP, PILOT	
LP602	1-518-527-51	LAMP, PILOT	
LP603	1-518-527-51	LAMP, PILOT	
		< TRANSISTOR >	
Q601	8-729-194-57	TRANSISTOR 2SC945-P	
Q602	8-729-194-57	TRANSISTOR 2SC945-P	
Q603	8-729-194-57	TRANSISTOR 2SC945-P	
Q604	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q605	8-729-194-57	TRANSISTOR 2SC945-P	
Q606	8-729-194-57	TRANSISTOR 2SC945-P (E,AR)	
		< RESISTOR >	
R601	1-247-871-11	CARBON 47K 5%	1/4W
R602	1-249-417-11	CARBON 1K 5%	1/4W F
R603	1-249-417-11	CARBON 1K 5%	1/4W F
R604	1-247-871-11	CARBON 47K 5%	1/4W
R605	1-247-871-11	CARBON 47K 5%	1/4W
R606	1-249-417-11	CARBON 1K 5%	1/4W F
R607	1-249-431-11	CARBON 15K 5%	1/4W
R608	1-247-871-11	CARBON 47K 5%	1/4W
R610	1-247-855-11	CARBON 10K 5%	1/4W
R611	1-247-879-11	CARBON 100K 5%	1/4W
R612	1-247-879-11	CARBON 100K 5%	1/4W
R613	1-247-879-11	CARBON 100K 5%	1/4W

Ref. No.	Part No.	Description			Remark	
R614	1-247-871-11	CARBON	47K	5%	1/4W	
R615	1-247-871-11	CARBON	47K	5%	1/4W	
R616	1-247-871-11	CARBON	47K	5%	1/4W	
R617	1-247-871-11	CARBON	47K	5%	1/4W	
R618	1-247-871-11	CARBON	47K	5%	1/4W	
R619	1-247-871-11	CARBON	47K	5%	1/4W	
R621	1-249-381-11	CARBON	1	5%	1/4W	F
R622	1-249-381-11	CARBON	1	5%	1/4W	F
R623	1-249-381-11	CARBON	1	5%	1/4W	F
R624	1-247-855-11	CARBON	10K	5%	1/4W	
R625	1-247-807-11	CARBON	100	5%	1/4W	
R626	1-247-807-11	CARBON	100	5%	1/4W	
R627	1-247-807-11	CARBON	100	5%	1/4W	
R628	1-247-871-11	CARBON	47K	5%	1/4W	
R629	1-249-409-11	CARBON	220	5%	1/4W	
R633	1-249-408-11	CARBON	180	5%	1/4W	F
R634	1-249-408-11	CARBON	180	5%	1/4W	F
R635	1-249-408-11	CARBON	180	5%	1/4W	F
R636	1-247-871-11	CARBON	47K	5%	1/4W	
R637	1-247-847-11	CARBON	4.7K	5%	1/4W (E,AR)	
R638	1-247-847-11	CARBON	4.7K	5%	1/4W	
R641	1-247-871-11	CARBON	47K	5%	1/4W	
R642	1-247-847-11	CARBON	4.7K	5%	1/4W	
R643	1-247-847-11	CARBON	4.7K	5%	1/4W	
R644	1-247-847-11	CARBON	4.7K	5%	1/4W	
R645	1-247-847-11	CARBON	4.7K	5%	1/4W	
R646	1-247-721-11	CARBON	4.7K	5%	1/4W	F
		< SWITCH >				
S601	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(POWER)				
S602	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(TUNER/BAND)				
S603	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(CD)				
S604	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(TAPE)				
S605	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PHONO)				
S606	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(DBFB)				
S607	1-571-914-21	SWITCH, KEY BOARD (VOLUME +)				
S608	1-571-914-21	SWITCH, KEY BOARD (VOLUME –)				
S609	1-572-481-11	SWITCH, KEY BOARD (1 KEY) (TUNING +, ▶▶ ▷▷I)				
S610	1-572-481-11	SWITCH, KEY BOARD (1 KEY) (TUNING –, I◁◁ ◀◀)				
S611	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PRESET +)				
S612	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PRESET –)				
S613	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(MEMORY)				
S614	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(■)				
S615	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(▷II)				
S616	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(SHUFFLE)				
S617	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(REPEAT)				
S618	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PROGRAM)				
S619	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(CLOCK SET)				
S620	1-572-481-11	SWITCH, KEY BOARD (1 KEY) (TIMER SET, CLOCK LIGHT)				
S621	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(TIMER MODE)				
S622	1-572-481-11	SWITCH, KEY BOARD (1 KEY)(PRESET EQ)				
		< VIBRATOR >				
X601	1-760-096-11	VIBRATOR, CRYSTAL (4.19MHz)				

****

Ref. No.	Part No.	Description			Remark
*	1-666-444-11	R/P SWITCH BOARD ****************			
		< CAPACITOR >			
C236	1-126-024-11	ELECT	220uF	20%	16V
C244	1-161-494-00	CERAMIC	0.022uF		25V
		< COIL >			
L202	1-411-822-11	COIL, CHOKE	470uH		
		< DIODE >			
D206	8-719-904-02	DIODE 1N4002T			
D207	8-719-904-02	DIODE 1N4002T			
		< SWITCH >			
SW201	1-571-135-11	SWITCH, PUSH (1KEY)(REC/PB)			

****

Ref. No.	Part No.	Description
*	1-666-440-11	SENSOR BOARD *************
		< IC >
RM601	8-749-013-84	IC SPS-447-1

****

Ref. No.	Part No.	Description
*	1-666-447-11	SW (A) BOARD ************
		< SWITCH >
S04	1-771-169-11	SWITCH, PUSH (TURN TABLE OPERATION DET)

****

Ref. No.	Part No.	Description
*	1-666-448-11	SW (B) BOARD ************
		< SWITCH >
S03	1-771-169-11	SWITCH, PUSH (TURN TABLE POSITION DET)

****

Ref. No.	Part No.	Description
*	1-666-449-11	SW (C) BOARD ************
		< SWITCH >
S02	1-571-300-31	SWITCH, ROTARY (OPEN/CLOSE DET)

****

Ref. No.	Part No.	Description
*	1-666-450-11	SW (D) BOARD ************
		< SWITCH >
S01	1-571-300-31	SWITCH, ROTARY (OPTICAL PICK-UP UP/DOWN DET)

****

TUNER

Ref. No.	Part No.	Description			Remark	
*	A-4403-154-A	TUNER BOARD, COMPLETE (AEP,UK)				
		*********************				
		< CAPACITOR >				
C102	1-162-294-11	CERAMIC	0.001uF	10%	50V	
C106	1-161-494-00	CERAMIC	0.022uF		25V	
C106A	1-162-207-11	CERAMIC	22PF	5%	50V	
C107	1-161-494-00	CERAMIC	0.022uF		25V	
C108	1-161-494-00	CERAMIC	0.022uF		25V	
C111	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C112	1-162-301-11	CERAMIC	0.0015uF	30%	16V	
C114	1-164-159-11	CERAMIC	0.1uF		50V	
C116	1-130-014-00	FILM	470PF	5%	50V	
C117	1-162-205-31	CERAMIC	18PF	5%	50V	
C118	1-104-665-11	ELECT	100uF	20%	16V	
C121	1-162-203-31	CERAMIC	15PF	5%	50V	
C122	1-126-961-11	ELECT	2.2uF	20%	50V	
C123	1-124-903-11	ELECT	1uF	20%	50V	
C124	1-162-206-31	CERAMIC	20PF	5%	50V	
C125	1-124-903-11	ELECT	1uF	20%	50V	
C126	1-110-671-31	CERAMIC	47000PF		50V	
C127	1-124-907-11	ELECT	10uF	20%	50V	
C128	1-161-494-00	CERAMIC	0.022uF		25V	
C129	1-124-903-11	ELECT	1uF	20%	50V	
C130	1-136-156-00	FILM	0.018uF	5%	50V	
C131	1-136-156-00	FILM	0.018uF	5%	50V	
C132	1-130-471-00	MYLAR	0.001uF	5%	50V	
C133	1-130-471-00	MYLAR	0.001uF	5%	50V	
C135	1-126-962-11	ELECT	3.3uF	20%	50V	
C137	1-126-959-11	ELECT	0.47uF	20%	50V	
C138	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C139	1-161-494-00	CERAMIC	0.022uF		25V	
C140	1-104-665-11	ELECT	100uF	20%	16V	
C141	1-161-494-00	CERAMIC	0.022uF		25V	
C142	1-104-665-11	ELECT	100uF	20%	16V	
C143	1-126-959-11	ELECT	0.47uF	20%	50V	
C144	1-161-494-00	CERAMIC	0.022uF		25V	
C145	1-162-217-31	CERAMIC	56PF	5%	50V	
C146	1-104-665-11	ELECT	100uF	20%	16V	
C147	1-161-494-00	CERAMIC	0.022uF		25V	
C148	1-164-159-11	CERAMIC	0.1uF		50V	
C149	1-161-494-00	CERAMIC	0.022uF		25V	
C150	1-164-159-11	CERAMIC	0.1uF		50V	
C151	1-162-285-31	CERAMIC	180PF	10%	50V	
C152	1-164-736-31	CERAMIC	0.0012uF	10%	50V	
C153	1-161-494-00	CERAMIC	0.022uF		25V	
C154	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C157	1-162-294-11	CERAMIC	0.001uF	10%	50V	
C160	1-161-494-00	CERAMIC	0.022uF		25V	
C161	1-124-903-11	ELECT	1uF	20%	50V	
C162	1-124-903-11	ELECT	1uF	20%	50V	
C163	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C164	1-162-290-11	CERAMIC	470PF	10%	50V	
C166	1-162-199-31	CERAMIC	10PF	5%	50V	
C207	1-104-664-11	ELECT	47uF	20%	16V	
C208	1-162-306-11	CERAMIC	0.01uF	20%	16V	
C209	1-162-282-31	CERAMIC	100PF	10%	50V	
C210	1-162-282-31	CERAMIC	100PF	10%	50V	
C211	1-162-282-31	CERAMIC	100PF	10%	50V	
C212	1-162-282-31	CERAMIC	100PF	10%	50V	
C213	1-162-210-31	CERAMIC	30PF	5%	50V	
C214	1-162-210-31	CERAMIC	30PF	5%	50V	
C215	1-126-233-11	ELECT	22uF	20%	50V	
		< FILTER >				
CF101	1-567-107-00	FILTER, CERAMIC				
CF102	1-567-107-00	FILTER, CERAMIC				
CF103	1-527-996-11	FILTER, CERAMIC				
CF104	1-579-856-31	DISCRIMINATOR, CERAMIC				
CF105	1-577-075-11	OSCILLATOR, CERAMIC				
		< CONNECTOR >				
CN101	1-779-766-11	CONNECTOR				
		< DIODE >				
D101	8-719-987-63	DIODE 1N4148M				
D102	8-719-987-63	DIODE 1N4148M				
D108	8-719-800-72	DIODE 1SV149-B				
D109	8-719-800-72	DIODE 1SV149-B				
D110	8-719-109-89	DIODE RD5.6ESB2				
D111	8-719-987-63	DIODE 1N4148M				
D112	8-719-987-63	DIODE 1N4148M				
D202	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC102	8-759-090-40	IC LA1831				
IC201	8-759-175-87	IC LC7218-ST				
		< JACK >				
JK101	1-694-126-11	TERMINAL BOARD (ANTENNA)				
		< COIL >				
L101	1-429-550-11	TRANSFORMER, FM ANT				
L102	1-412-503-11	INDUCTOR 22uH				
L103	1-412-503-11	INDUCTOR 22uH				
L104	1-411-901-11	COIL, ANTENNA				
L105	1-429-555-11	TRANSFORMER, MW OSC				
L106	1-412-503-11	INDUCTOR 22uH				
L107	1-408-417-00	INDUCTOR 47uH				
L108	1-408-417-00	INDUCTOR 47uH				
L110	1-410-527-11	INDUCTOR 100uH				
L203	1-412-507-11	INDUCTOR 47uH				
		< TRANSISTOR >				
Q101	8-729-015-41	TRANSISTOR 2SC1675-T1				
Q105	8-729-902-80	TRANSISTOR DTA114YS				
Q106	8-729-041-83	TRANSISTOR 2SK544E				
Q107	8-729-194-57	TRANSISTOR 2SC945-P				
Q108	8-729-194-57	TRANSISTOR 2SC945-P				
		< RESISTOR >				
R104	1-247-807-11	CARBON	100	5%	1/4W	
R105	1-249-417-11	CARBON	1K	5%	1/4W	F
R106	1-247-839-11	CARBON	2.2K	5%	1/4W	
R107	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R108	1-249-411-11	CARBON	330	5%	1/4W	

Ref. No.	Part No.	Description			Remark	
R112	1-247-849-11	CARBON	5.6K	5%	1/4W	
R113	1-247-879-11	CARBON	100K	5%	1/4W	
R114	1-247-879-11	CARBON	100K	5%	1/4W	
R115	1-249-397-11	CARBON	22	5%	1/4W	F
R118	1-247-807-11	CARBON	100	5%	1/4W	
R119	1-249-413-11	CARBON	470	5%	1/4W	F
R120	1-247-843-11	CARBON	3.3K	5%	1/4W	
R121	1-247-843-11	CARBON	3.3K	5%	1/4W	
R122	1-247-843-11	CARBON	3.3K	5%	1/4W	
R123	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R126	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R127	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R128	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R129	1-249-427-11	CARBON	6.8K	5%	1/4W	F
⚠R130	1-212-986-00	FUSIBLE	150	5%	1/2W	F
R131	1-249-417-11	CARBON	1K	5%	1/4W	F
R132	1-247-855-11	CARBON	10K	5%	1/4W	
R133	1-247-843-11	CARBON	3.3K	5%	1/4W	
R134	1-247-843-11	CARBON	3.3K	5%	1/4W	
R137	1-247-855-11	CARBON	10K	5%	1/4W	
R140	1-249-417-11	CARBON	1K	5%	1/4W	F
R141	1-249-409-11	CARBON	220	5%	1/4W	F
R145	1-249-417-11	CARBON	1K	5%	1/4W	F
R146	1-247-807-11	CARBON	100	5%	1/4W	
R155	1-249-411-11	CARBON	330	5%	1/4W	
R156	1-247-855-11	CARBON	10K	5%	1/4W	
R210	1-247-847-11	CARBON	4.7K	5%	1/4W	
R211	1-249-417-11	CARBON	1K	5%	1/4W	F
R212	1-247-855-11	CARBON	10K	5%	1/4W	
R213	1-247-855-11	CARBON	10K	5%	1/4W	
R214	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R215A	1-249-417-11	CARBON	1K	5%	1/4W	F
		< VARIABLE RESISTOR >				
SFR101	1-238-600-11	RES, ADJ, CARBON 10K				
		< TRANSFORMER >				
T101	1-429-553-11	TRANSFORMER, FM IFT				
T102	1-429-554-11	TRANSFORMER, AM IFT				
		< TRIMMER >				
TC102	1-141-304-21	CAP, TRIMMER 10PF				
		< FRONT END >				
U1	1-473-755-11	BLOCK (FRONT END)				
		< VIBRATOR >				
X201	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)				

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*	A-4398-942-A	TUNER BOARD, COMPLETE (E,AR,MX) ********************			
		< CAPACITOR >			
C101	1-162-294-31	CERAMIC	0.001uF	10%	50V
C102	1-162-294-31	CERAMIC	0.001uF	10%	50V

Ref. No.	Part No.	Description			Remark
C103	1-162-197-31	CERAMIC	6.8PF	10%	50V
C104	1-161-494-00	CERAMIC	0.022uF		25V
C105	1-162-206-31	CERAMIC	20PF	5%	50V
C106	1-161-494-00	CERAMIC	0.022uF		25V
C107	1-161-494-00	CERAMIC	0.022uF		25V
C108	1-161-494-00	CERAMIC	0.022uF		25V
C110	1-162-191-31	CERAMIC	2.2PF	10%	50V
C111	1-162-217-31	CERAMIC	56PF	5%	50V
C112	1-162-282-31	CERAMIC	100PF	10%	50V
C114	1-164-159-11	CERAMIC	0.1uF		50V
C115	1-162-294-31	CERAMIC	0.001uF	10%	50V
C116	1-130-014-00	FILM	470PF	5%	50V
C117	1-162-208-31	CERAMIC	24PF	5%	50V
C118	1-126-933-11	ELECT	100uF	20%	16V
C121	1-162-203-31	CERAMIC	15PF	5%	50V
C122	1-126-961-11	ELECT	2.2uF	20%	50V
C123	1-126-960-11	ELECT	1uF	20%	50V
C124	1-162-206-31	CERAMIC	20PF	5%	50V
C125	1-126-960-11	ELECT	1uF	20%	50V
C126	1-162-600-11	CERAMIC	0.047uF	10%	16V
C127	1-126-964-11	ELECT	10uF	20%	50V
C128	1-161-494-00	CERAMIC	0.022uF		25V
C129	1-126-960-11	ELECT	1uF	20%	50V
C130	1-136-155-00	FILM	0.015uF	5%	50V
C131	1-136-155-00	FILM	0.015uF	5%	50V
C132	1-130-473-00	MYLAR	0.0015uF	5%	50V
C133	1-130-473-00	MYLAR	0.0015uF	5%	50V
C134	1-162-294-31	CERAMIC	0.001uF	10%	50V
C135	1-126-962-11	ELECT	3.3uF	20%	50V
C137	1-126-959-11	ELECT	0.47uF	20%	50V
C138	1-162-306-11	CERAMIC	0.01uF	20%	16V
C139	1-161-494-00	CERAMIC	0.022uF		25V
C140	1-126-933-11	ELECT	100uF	20%	16V
C141	1-161-494-00	CERAMIC	0.022uF		25V
C142	1-126-933-11	ELECT	100uF	20%	16V
C143	1-126-962-11	ELECT	3.3uF	20%	50V
C144	1-162-306-11	CERAMIC	0.01uF	20%	16V
C145	1-162-217-31	CERAMIC	56PF	5%	50V
C147	1-161-494-00	CERAMIC	0.022uF		25V
C148	1-162-294-31	CERAMIC	0.001uF	10%	50V
C149	1-161-494-00	CERAMIC	0.022uF		25V
C150	1-164-159-11	CERAMIC	0.1uF		50V
C151	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C152	1-162-301-11	CERAMIC	0.0015uF	30%	16V
C153	1-161-494-00	CERAMIC	0.022uF		25V
C155	1-162-282-31	CERAMIC	100PF	10%	50V
C157	1-162-294-31	CERAMIC	0.001uF	10%	50V
C160	1-161-494-00	CERAMIC	0.022uF		25V
C161	1-126-960-11	ELECT	1uF	20%	50V
C162	1-126-960-11	ELECT	1uF	20%	50V
C207	1-126-967-11	ELECT	47uF	20%	16V
C208	1-162-306-11	CERAMIC	0.01uF	20%	16V
C209	1-162-282-31	CERAMIC	100PF	10%	50V
C210	1-162-282-31	CERAMIC	100PF	10%	50V
C211	1-162-282-31	CERAMIC	100PF	10%	50V
C212	1-162-282-31	CERAMIC	100PF	10%	50V
C213	1-162-209-31	CERAMIC	27PF	5%	50V
C214	1-162-209-31	CERAMIC	27PF	5%	50V

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

TUNER

Ref. No.	Part No.	Description			Remark	
C215	1-128-551-11	ELECT	22uF	20%	25V	
C218	1-162-294-31	CERAMIC	0.001uF	10%	50V	
		< FILTER >				
CF101	1-567-390-11	FILTER,CERAMIC				
CF102	1-567-107-00	FILTER, CERAMIC				
CF103	1-527-996-11	FILTER, CERAMIC				
CF104	1-579-856-11	DISCRIMINATOR, CERAMIC				
CF105	1-577-075-11	OSCILLATOR, CERAMIC				
		< CONNECTOR >				
CN101	1-779-766-11	CONNECTOR				
		< DIODE >				
D101	8-719-987-63	DIODE 1N4148M				
D102	8-719-987-63	DIODE 1N4148M				
D105	8-719-987-63	DIODE 1N4148M				
D106	8-719-059-68	DIODE KV1340A-2				
D107	8-719-059-68	DIODE KV1340A-2				
D108	8-719-800-72	DIODE 1SV149-B				
D109	8-719-800-72	DIODE 1SV149-B				
D110	8-719-109-89	DIODE RD5.6ESB2				
D111	8-719-987-63	DIODE 1N4148M				
D112	8-719-987-63	DIODE 1N4148M				
		< IC >				
IC101	8-759-801-96	IC LA1186				
IC102	8-759-090-40	IC LA1831				
IC201	8-759-175-87	IC LC7218-ST				
		< JACK >				
JK101	1-694-092-21	TERMINAL BOARD (SPEAKER)(ANTENNA)				
		< COIL >				
L101	1-429-550-11	TRANSFORMER, FM ANT				
L102	1-429-551-11	TRANSFORMER, FM RF				
L103	1-411-798-11	COIL, FM OSC				
L104	1-411-901-11	COIL, ANTENNA				
L105	1-429-555-11	TRANSFORMER, MW OSC				
L107	1-408-417-00	INDUCTOR 47uH				
L108	1-408-417-00	INDUCTOR 47uH				
L203	1-410-517-11	INDUCTOR 47uH				
		< TRANSISTOR >				
Q101	8-729-015-41	TRANSISTOR 2SC1675-T1				
Q102	8-729-015-41	TRANSISTOR 2SC1675-T1				
Q105	8-729-902-80	TRANSISTOR DTA114YS				
Q106	8-729-041-83	TRANSISTOR 2SK544E				
Q107	8-729-194-57	TRANSISTOR 2SC945-P				
Q108	8-729-194-57	TRANSISTOR 2SC945-P				
Q109	8-729-904-36	TRANSISTOR DTC114YS				
		< RESISTOR >				
R101	1-247-879-11	CARBON	100K	5%	1/4W	
R102	1-249-417-11	CARBON	1K	5%	1/4W	F
R103	1-249-393-11	CARBON	10	5%	1/4W	F
R104	1-247-807-11	CARBON	100	5%	1/4W	
R105	1-249-417-11	CARBON	1K	5%	1/4W	F
R106	1-247-843-11	CARBON	3.3K	5%	1/4W	
R107	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R108	1-249-411-11	CARBON	330	5%	1/4W	
R109	1-247-879-11	CARBON	100K	5%	1/4W	
R110	1-247-867-11	CARBON	33K	5%	1/4W	
R111	1-249-417-11	CARBON	1K	5%	1/4W	F
R112	1-247-807-11	CARBON	100	5%	1/4W	
R113	1-247-879-11	CARBON	100K	5%	1/4W	
R114	1-247-879-11	CARBON	100K	5%	1/4W	
R115	1-249-397-11	CARBON	22	5%	1/4W	F
R118	1-247-807-11	CARBON	100	5%	1/4W	
R119	1-249-413-11	CARBON	470	5%	1/4W	F
R120	1-247-843-11	CARBON	3.3K	5%	1/4W	
R121	1-247-843-11	CARBON	3.3K	5%	1/4W	
R122	1-247-843-11	CARBON	3.3K	5%	1/4W	
R123	1-247-724-11	CARBON	8.2K	5%	1/4W	F
R126	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R127	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R128	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R129	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R130	1-249-407-11	CARBON	150	5%	1/4W	F
R131	1-247-713-11	CARBON	1K	5%	1/4W	F
R132	1-247-855-11	CARBON	10K	5%	1/4W	
R133	1-247-839-11	CARBON	2.2K	5%	1/4W	
R134	1-247-843-11	CARBON	3.3K	5%	1/4W	
R138	1-247-847-11	CARBON	4.7K	5%	1/4W	
R140	1-247-843-11	CARBON	3.3K	5%	1/4W	
R145	1-247-839-11	CARBON	2.2K	5%	1/4W	
R149	1-249-431-11	CARBON	15K	5%	1/4W	
R155	1-247-725-11	CARBON	10K	5%	1/4W	F
R210	1-247-847-11	CARBON	4.7K	5%	1/4W	
R211	1-249-417-11	CARBON	1K	5%	1/4W	F
R212	1-247-855-11	CARBON	10K	5%	1/4W	
R213	1-249-417-11	CARBON	1K	5%	1/4W	F
R214	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R215A	1-249-417-11	CARBON	1K	5%	1/4W	F
		< VARIABLE RESISTOR >				
SFR101	1-238-600-11	RES, ADJ, CARBON 10K				
		< TRANSFORMER >				
T101	1-429-553-11	TRANSFORMER, FM IFT				
T102	1-429-554-11	TRANSFORMER, AM IFT				
		< TRIMMER >				
TC101	1-141-232-00	CAP, TRIMMER				
TC102	1-141-232-00	CAP, TRIMMER				
		< VIBRATOR >				
X201	1-579-585-11	VIBRATOR, CRYSTAL (7.2MHz)				

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Ref. No.	Part No.	Description	Remark
*	1-666-452-11	VOL SELECT BOARD (E,AR) ***********************	
		< SWITCH >	
⚠SW801	1-762-734-11	SWITCH, SLIDE (VOLTAGE SELECTOR)	

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Ref. No.	Part No.	Description	Remark
		MISCELLANEOUS *************	
⚠12	1-551-506-99	CORD, POWER (E,AR,MX)	
⚠12	1-696-572-21	CORD, POWER (UK)	
⚠12	1-765-558-11	CORD, POWER (AEP)	
* 163	1-759-417-11	DECK, MECHANICAL	
251	1-769-856-11	WIRE (FLAT TYPE) (5 CORE)	
265	1-773-152-11	WIRE (FLAT TYPE) (21 CORE)	
⚠308	8-848-379-31	OPTICAL PICK-UP KSS-213B/S-N	
HE901	9-980-280-01	E HEAD (ERASE)	
HP901	9-980-287-01	HEAD (PLAY)	
HRP901	9-980-279-01	HEAD (REC/PLAY)	
LCD601	1-801-841-11	DISPLAY PANEL, LIQUID CRYSTAL	
M101	X-2625-877-1	MOTOR ASSY (SPINDLE)	
M102	X-2625-769-1	MOTOR ASSY (SLED)	
M103	X-4948-765-1	MOTOR ASSY (TURN TABLE)	
M104	X-4948-766-1	MOTOR ASSY (A) (TRAY)	
M901	9-980-281-01	MOTOR (CAPSTAN/REEL)	
⚠PT302	1-431-461-11	TRANSFORMER, POWER (E,AR,MX)	
⚠PT302	1-431-462-11	TRANSFORMER, POWER (AEP,UK)	
SW202	9-980-270-01	LEAF SWITCH (A DECK)	
SW203	9-980-270-01	LEAF SWITCH (B DECK)	
SW204	9-980-271-01	LEAF SWITCH (PLAY)	

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Ref. No.	Part No.	Description	Remark
		************** HARDWARE LIST **************	
#1	7-685-647-79	SCREW +P 3X10 TYPE2 SLIT	
#2	7-685-645-79	SCREW +BVTP 3X6 TYPE2 SLIT	
#3	7-685-158-19	SCREW +P 4X6 TYPE2 SLIT	
#5	7-685-131-19	SCREW +P 2.6X4 TYPE2 SLIT	
#6	7-685-139-29	SCREW, TAPPING, (M2.6X20)	
#7	7-685-134-19	SCREW (+ PTPWH) (2.6X8)	
#9	7-624-118-01	RING, RETAINING E-2.5	
#10	7-685-903-21	SCREW +PTPWH 3X8 (TYPE2)	
#11	7-685-106-19	SCREW +P 2X10 TYPE2 SLIT	
#12	7-621-255-15	SCREW +P 2X3	
#13	7-685-139-19	SCREW +BTP 2.6X16 TYPE2 N-S	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.